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L. C. Hanson
Company
Johnson Hill
Group (6 sites),
Dawson and
Richland Counties,
Montana, Mont A/E

JOHNSON HILL GROUP (6 SITES)
DAWSON AND RICHLAND COUNTIES, MONTANA
MONT A/E 88-46-117

September, 1989

JOHNSON HILL MINE
SCHMIDT MINE
NELSON MINE

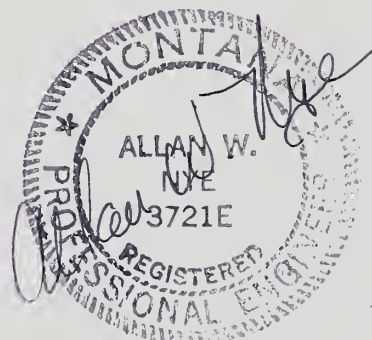
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FINAL REPORT

**JOHNSON HILL GROUP (6 SITES)
DAWSON AND RICHLAND COUNTIES, MONTANA
MONT A/E 88-46-117**

September, 1989

**JOHNSON HILL MINE
SCHMIDT MINE
NELSON MINE
GOSSEN MINE
LAMBERT II MINE
LAMBERT II NE MINE**

Prepared for:
DEPARTMENT OF STATE LANDS
Abandoned Mine Reclamation Bureau
1625 11th Avenue
Helena, MT 59620

Prepared by:
L.C. HANSON COMPANY
P.O. Box 299
Helena, MT 59624

TOM KLEMPER
Project Engineer

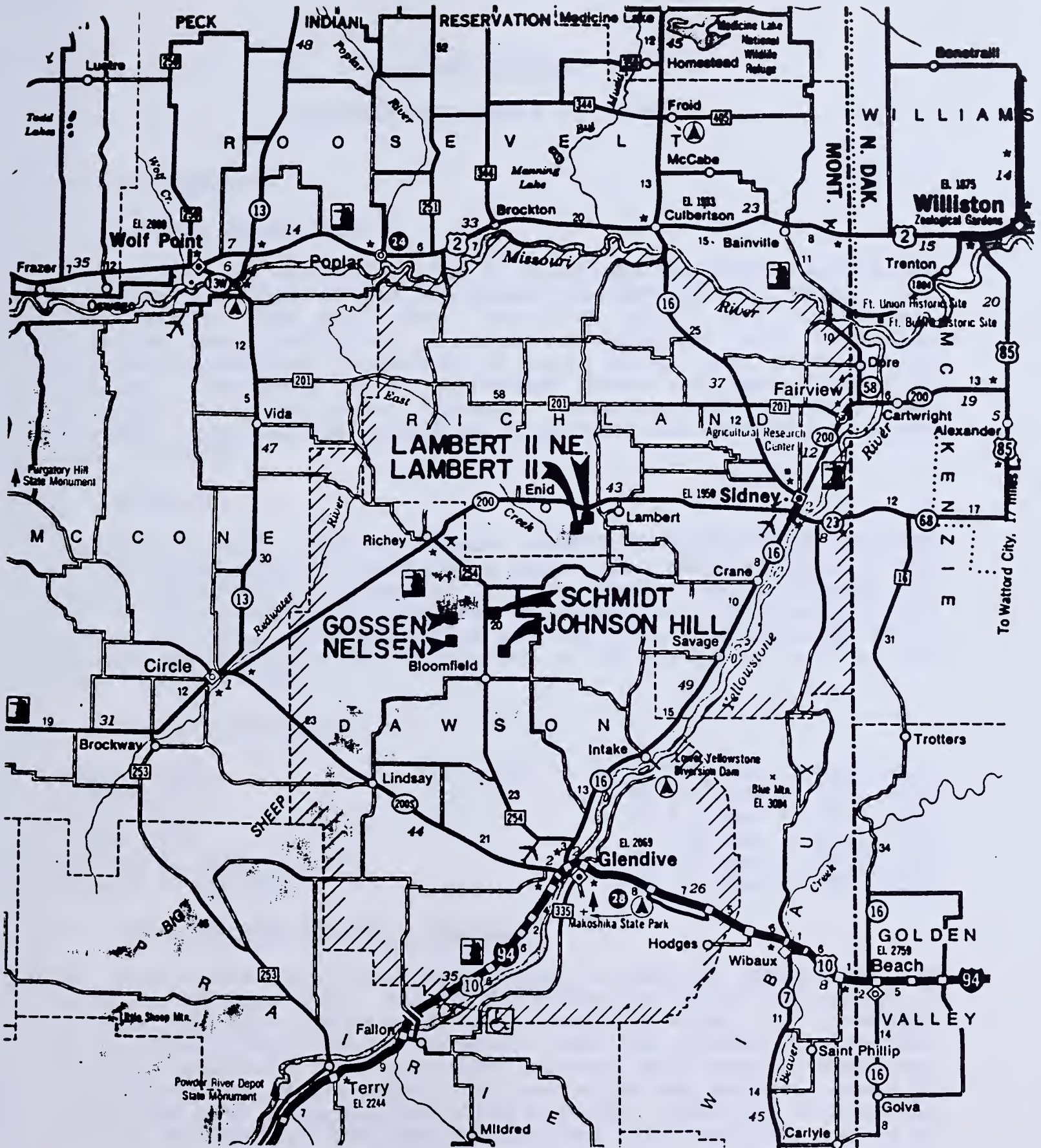
DAVE MCCLOY AND BILL KRAMLICH
Project Inspectors

L. C. HANSON COMPANY
CONSULTING ENGINEERS & SURVEYORS
HELENA — GREAT FALLS — GLENDIVE

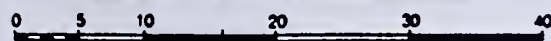


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AREA MAP



One inch represents approximately 16 miles

FINAL REPORT

JOHNSON HILL GROUP (6 SITES)

I. INTRODUCTION

A. Project Objectives

The six projects were undertaken to alleviate the unsafe conditions resulting from each of the abandoned underground coal mines. The objectives of the work were: removing debris and structures, salvaging and replacing topsoil, backfilling and regrading subsidence features, disposing of waste piles, and closing mine openings. Revegetation of disturbed areas was accomplished by salvaging and replacing topsoil, fertilizing, seeding, and mulching. Fencing was installed to protect the revegetated areas from livestock.

B. History

The JOHNSON HILL, SCHMIDT, NELSON, GOSSEN, LAMBERT II AND LAMBERT II N.E. mines were all subsurface mines that supplied coal to the area communities and ranchers from the early 1900's through the 1950's. The JOHNSON HILL mine was converted to a strip mine in the 1950's but rural electrification and the great reduction in rural populations resulted in the closing of this mine as well as the other smaller mines.

C. Project Locations

JOHNSON MINE	E 1/2 Sec 31 and W 1/2 Sec 32 T20N R54E
SCHMIDT MINE	NW 1/4 Sec 34 T21N R54E
NELSON MINE	NE 1/4 Sec 19 T20N R53E
GOSSEN MINE	S 1/3 Sec 7 T20N R53E
LAMBERT II MINE	SE 1/4 Sec 19 T22N R55E
LAMBERT II NE MINE	NW 1/4 Sec 17 T22N R55E

D. Site Description and Problems

The land surrounding the mine sites is native grasslands and agricultural farm land. All of the mines are drifts into banks or hills on the outcropping coal seam. The mine sites are accessible by the public and located in areas used for outdoor recreation. The mine operators left the sites impacted with debris, abandoned structures, coal waste piles, and open adits and shafts. Areas of overburden have collapsed into mine workings, resulting in numerous surface depressions and open access into mine workings. None of the sites contain restraints or warning of the hazards that exist. Farm tractors collapsed the mine overburden on the JOHNSON HILL and the LAMBERT II mines while cultivating the fields.

II. DESCRIPTION OF RECLAMATION PROJECT

A. Project Planning

The planning for this project was similar to other reclamation projects completed by L.C. Hanson Company and the Montana Department of State Lands. Reclamation recommendations were determined from the results of data gathered through aerial photography, landowner/operator interviews, site visits, historical and courthouse records, research data, and extensive experience with similar projects.

B. Chronological History

Pre-Bid Conference	September 12, 1988
Bid Opening	September 22, 1988
Award to Contractor	October 5, 1988
Contractor	MITCHELL BROTHERS, INC.
Agreement	October 6, 1988
Notice to Proceed	October 18, 1988
Construction Began	October 24, 1988
Winter Shut-Down	November 18, 1988
Work Resumed	June 6, 1989
Construction Completed	July 28, 1989

C. Equipment

Salvaging and replacing topsoil, grading and backfilling subsided areas, closing mine openings, disposing of waste piles, disposing of debris/structures, and excavating banks were performed with the following equipment:

Caterpillar D-7 Dozer w/straight blade
Case 680E Backhoe w/front-end bucket
John Deere 690 Excavator
Michigan 110-11B Paddle Wheel Scraper
Terex TS-14 Scraper
International Truck w/4000 gal. water tank
International Truck w/3100 gal. water tank

Revegetation was completed with the following equipment:

Ford "N" Tractor
McCormick 6' Disc Drill
Tandem Disc
Aero Mulcher mounted on 2-ton truck
John Deere Crimping Disc

D. Construction Operations

The reclamation on each mine site was completed prior to beginning another site. The Contractor completed the work in the order outlined in the project documents for each site.

Debris cleanup and removal of structures were the first items of work performed. Some sites required gathering debris by hand while other mines needed a truck and loader. At the Landowner's request, items were salvaged and stockpiled on site. The remaining combustible debris was burned and the non-combustible was compacted and buried in the fill areas of the projects.

Following debris cleanup and structure removal, topsoil stripping was performed on all embankment and excavation areas. The topsoil was stockpiled for later replacement. Topsoil from accessible areas was stripped with the dozer while the backhoe and excavator removed topsoil from within subsidence or rough terrain areas.

Subsidence grading, contouring, and waste pile disposal were completed with the scrapers, dozer, and water trucks. Backfilling subsidence required the dump truck, water truck, and front-end loader on the backhoe. All embankment required compaction with rubber-tired equipment. Coal slack was buried in fill areas with 2' minimum cover of suitable material.

Adit earth seals were completed with the backhoe, excavator, dozer, and scrapers. Shaft seals were accomplished with the placement of a concrete cap.

Following all excavation and embankment work items, the scrapers and dozers replaced the topsoil to a uniform depth over all disturbed areas.

Revegetation was completed by first blending the broadcasted fertilizer into the topsoil with the disc. Then the drill applied the seed to the prepared seedbed, followed by mulch spreading and crimping. Disturbed areas within livestock grazing areas were fenced to protect new seed growth.

III. COST SUMMARY

A. Final Payment Request and Reconciliation Change Order

A copy of the Final Payment Request and Reconciliation Change Order are contained in Appendix A. These documents contain the final quantities and costs for each work item.

B. Change Orders

Change Order No. 1 - TOTAL \$4635.63

Item #1 (JOHNSON HILL SITE)

Work Directive Change #2 - A new collapse was backfilled.

Item #2 (JOHNSON HILL MINE)

Work Directive Change #3 - Additional subsidence was backfilled.

Item #3 (SCHMIDT MINE)

Work Directive Change #4 - Additional mine opening was closed and additional subsidence was backfilled.

Item #4 (LAMBERT II MINE)

Work Directive Change #5 - An additional shaft was closed, a highwall was reduced, and a subsidence was backfilled.

Item #5 (BULLER MINE) - Added to project

Work Directive Change #6 - Hazards were alleviated at this site per D.S.L. directive. The work included closing mine openings, disposing waste piles, and revegetating.

Item #6 (SOUTH FORK MINE) - Added to project

Work Directive Change #7 - Hazards were alleviated at this site per D.S.L. directive. The work included debris cleanup, closing mine openings, backfilling subsidence, and revegetating.

Item #7 Reconciliation of Final Quantities

C. Costs Per Site/Unit

COST SUMMARY

JOHNSON HILL MINE

ITEM	*TOTAL COST	UNITS	COST/UNIT
MOBILIZATION	\$ 1500	SITE	\$ 1500/SITE
REMOVAL OF STRUCTURES	\$ 500	SITE	\$ 500/SITE
DEBRIS CLEANUP	\$ 500	SITE	\$ 500/SITE
SALVAGE & REPLACE TOPSOIL	\$ 1274	1593 C.Y.	\$ 0.80/CY
CLOSE MINE OPENINGS			
A. ADITS	\$ 700	2 EACH	\$ 350 EACH
B. SHAFTS	\$ 1200	1 EACH	\$ 1200 EACH
WASTE PILE DISPOSAL	\$28000	SITE	\$28000/SITE
SUBSIDENCE BACKFILL	\$ 143	143 C.Y.	\$ 1.00/CY
PROVIDE WATER	\$ 3435	343.5 MGAL	\$ 10/MGAL
REVEGETATION	\$ 6397	5.75 ACRE	\$ 1113/ACRE
FARM FENCE	\$ 3111	2539 L.F.	\$ 1.23/LF
TOTAL	\$46760	5.75 ACRE	\$ 8132/ACRE

* Rounded to nearest whole dollar

COST SUMMARY

SCHMIDT MINE

ITEM	*TOTAL COST	UNITS	COST/UNIT
MOBILIZATION	\$ 700	SITE	\$ 700/SITE
DEBRIS CLEANUP	\$ 50	SITE	\$ 50/SITE
SALVAGE & REPLACE TOPSOIL	\$ 236	118 C.Y.	\$ 2.00/CY
CLOSE MINE OPENINGS			
A. ADITS	\$ 1000	2 EACH	\$ 500 EACH
B. SHAFTS	\$ 1000	2 EACH	\$ 500 EACH
REVEGETATION	\$ 480	0.28 ACRE	\$ 1715/ACRE
TOTAL	\$ 3466	0.28 ACRE	\$12379/ACRE

* Rounded to nearest whole dollar

COST SUMMARY

NELSON MINE

ITEM	*TOTAL COST	UNITS	COST/UNIT
MOBILIZATION	\$ 500	SITE	\$ 500/SITE
DEBRIS CLEANUP	\$ 200	SITE	\$ 200/SITE
SALVAGE & REPLACE TOPSOIL	\$ 1128	902 C.Y.	\$ 1.25/CY
WASTE PILE DISPOSAL	\$ 2000	SITE	\$ 2000/SITE
SUBSIDENCE GRADING	\$ 750	SITE	\$ 750/SITE
PROVIDE WATER	\$ 165	16.5 MGAL	\$ 10/MGAL
REVEGETATION	\$ 2448	2.2 ACRE	\$ 1113/ACRE
TOTAL	\$ 7190	2.2 ACRE	\$ 3268/ACRE

* Rounded to nearest whole dollar

COST SUMMARY

GOSSEN MINE

ITEM	*TOTAL COST	UNITS	COST/UNIT
MOBILIZATION	\$ 1500	SITE	\$ 1500/SITE
DEBRIS CLEANUP	\$ 100	SITE	\$ 100/SITE
SALVAGE & REPLACE TOPSOIL	\$ 312	208 C.Y.	\$ 1.50/CY
CLOSE MINE OPENINGS			
A. ADITS	\$ 1000	1 EACH	\$ 1000 EACH
B. SHAFTS	\$ 1000	1 EACH	\$ 1000 EACH
SUBSIDENCE GRADING	\$ 750	SITE	\$ 750/SITE
PROVIDE WATER	\$ 25	2.5 MGAL	\$ 10/MGAL
REVEGETATION	\$ 681	0.42 ACRE	\$ 1623/ACRE
FARM FENCE	\$ 1249	743 L.F.	\$ 1.68/LF
TOTAL	\$ 6618	0.42 ACRE	\$15757/ACRE

* Rounded to nearest whole dollar

COST SUMMARY

LAMBERT II MINE

ITEM	*TOTAL COST	UNITS	COST/UNIT
MOBILIZATION	\$ 900	SITE	\$ 900/SITE
DEBRIS CLEANUP	\$ 100	SITE	\$ 100/SITE
SALVAGE & REPLACE TOPSOIL	\$ 554	554 C.Y.	\$ 1.00/CY
SUBSIDENCE BACKFILL	\$ 882	882 C.Y.	\$ 1.00/CY
WASTE PILE DISPOSAL	\$ 150	SITE	\$ 150/SITE
SUBSIDENCE GRADING	\$ 500	SITE	\$ 500/SITE
PROVIDE WATER	\$ 38	2.5 MGAL	\$ 15/MGAL
REVEGETATION	\$ 1709	1.25 ACRE	\$ 1367/ACRE
TOTAL	\$ 4833	1.25 ACRE	\$ 3866/ACRE

* Rounded to nearest whole dollar

COST SUMMARY

LAMBERT II NE MINE

ITEM	*TOTAL COST	UNITS	COST/UNIT
MOBILIZATION	\$ 176	SITE	\$ 176/SITE
SALVAGE & REPLACE TOPSOIL	\$ 375	375 C.Y.	\$ 1.00/CY
WASTE PILE DISPOSAL	\$ 100	SITE	\$ 100/SITE
CLOSE MINE OPENINGS			
A. ADITS	\$ 500	1 EACH	\$ 500 EACH
B. SHAFTS	\$ 600	1 EACH	\$ 600 EACH
SUBSIDENCE GRADING	\$ 310	SITE	\$ 310/SITE
PROVIDE WATER	\$ 25	2.5 MGAL	\$ 10/MGAL
REVEGETATION	\$ 1389	1.10 ACRE	\$ 1263/ACRE
TOTAL	\$ 3475	1.10 ACRE	\$ 3159/ACRE

* Rounded to nearest whole dollar

IV. SUMMARY

A. Completed Reclamation

The reclamation work was completed in 50 days, or 69% of the allowable Contract time. The TOTAL COST of the project was \$79,285.26, which is 106% of the original Contract estimate.

B. Comments

Mitchell Brothers, Inc. completed all the work with full cooperation and to a high level of workmanship. The project involved work at eight (8) different sites with ten (10) individual landowners. The Contractor's efforts to cooperate with these landowners helped the job progress smoothly. The AML staff at the Department of State Lands also contributed to the success of the project by coordinating all activities with the landowners and by handling construction-phase questions in a prompt manner.

The completed project complies with the Contract requirements and L.C. Hanson Company has recommended acceptance of the project to the Montana Department of State Lands.

V. SLIDE LOGS

The Slides and Slide Log are contained in Appendix B.

VI. PLAN SHEETS

Copies of the Plans are contained in Appendix C.

VII. PROFESSIONAL SERVICES

An Analysis of Professional Service Fees is contained in Appendix D.

APPENDIX A

RECEIVED

AUG 15 1989

Payment Request No. Two (2) Final

L. C. HANSON CO.

From: November 19, 1988

To: June 28, 1989

Project Name & Number: Johnson Hill Group (6 Sites) Mont. A/E 88-46-117

Location: Dawson and Richland Counties Name of Contractor: Mitchell Bros. Inc.

Address: P.O. Box 736, Glendive, MT 59330

Summary Of Project Status

Amount of Original Contract Work	\$74,649.63
Amount of Approved Change Order(s) Work	4,635.63
TOTAL CONTRACT AMOUNT	\$79,285.26
Contract Time Used to Date	50 Days
Percentage of Contract Time Used	69%
Percentage of Contract Amount Earned	100%

Amount of Original Contract Work Completed	\$72,342.41
Amount of Authorized Overruns(Underruns) Completed	(2,307.22)
Amount of Approved Change Order(s) Work Completed	6,942.85
Amount for Materials On Site	0.00
AMOUNT OF ALL WORK COMPLETED TO DATE	79,285.26

TOTAL AMOUNT Earned To Date	79,285.26
Less Previous Amount Earned	48,555.66
Amount Payable This Period	30,729.60
Less 1% Gross Receipts Tax	307.30
TOTAL DUE CONTRACTOR THIS PERIOD	\$30,422.30

Requested By: Mitchell Bros. Inc. [Signature] Date: 7/31/89
(Contractor)Checked By: L.C. Hanson Co. [Signature] Date: 8/1/89
(Engineer)Approved By: Department of State Lands [Signature] Date: 8/5/89
Abandoned Mine Reclamation Bureau (Owner)

PAY REQUEST NO. TWO (2) FINAL

L.C. Hanson Co.

PROJECT: Johnson Hill Group (6 Sites)

MONT A/E 88-46-117

Page 2 of 12

SCH. I - Johnson Hill Mine

ITEMIZATION OF QUANTITIES AND COSTS

ITEM NO.	DESCRIPTION	ESTIMATED PLAN QUANTITY	UNIT BID PRICE	UNITS OF WORK COMPLETED THIS REQUEST	UNITS OF WORK COMPLETED TO DATE	TOTAL COST OF COMPLETED WORK	% OF EST. QUANT. COMP.
1	Mobilization	1.0 L.S.	1500.00	0.00	1.00	1500.00	100*
2	Removal of Structures	1.0 L.S.	500.00	0.00	1.00	500.00	100*
3	Debris Cleanup	1.0 L.S.	500.00	0.00	1.00	500.00	100*
4	Salvage & Replace Topsoil	2400.0 C.Y.	0.80	0.00	1593.00	1274.40	100*
5	Close Mine Openings						
	A. Adits	2.0 EACH	350.00	0.00	2.00	700.00	100*
	B. Shafts	1.0 EACH	600.00	0.00	2.00	1200.00	100*
6	Waste Pile Disposal	1.0 L.S.	28000.00	0.00	1.00	28000.00	100*
7	Subsidence Backfill	60.0 C.Y.	1.00	0.00	143.00	143.00	100*
8	Provide Water	646.2 MGAL	10.00	0.00	343.50	3435.00	100*
9	Fertilizer	5.0 AC	92.50	0.00	5.75	531.88	100*
10	Seed	5.0 AC	420.00	0.00	5.75	2415.00	100*
11	Mulch	5.0 AC	600.00	0.00	5.75	3450.00	100*
12	Farm Fence - Type F-3M	2320.0 L.F.	0.80	0.00	2539.00	2031.20	100*
13	Double Panel	8.0 EACH	90.00	0.00	9.00	810.00	100*
14	Single Panel	3.0 EACH	75.00	0.00	2.00	150.00	100*
15	F-3 Farm Fence Gate	16 L.F.	7.50	0.00	16.00	120.00	100*
	Total - Schedule I					46760.48	

* Work completed on this item

L.C. Hanson Co.

Page 3 of 12 |

ITEMIZATION OF QUANTITIES AND COSTS

ITEM NO.	DESCRIPTION	ESTIMATED PLAN QUANTITY	UNIT BID PRICE	UNITS OF WORK COMPLETED THIS REQUEST	UNITS OF WORK COMPLETED TO DATE	TOTAL COST OF COMPLETED WORK	% OF EST. QUANT. COMP.
1	Mobilization	1.0 L.S.	700.00	1.00	1.00	700.00	100*
2	Debris Cleanup	1.0 L.S.	50.00	1.00	1.00	50.00	100*
3	Salvage & Replace Topsoil	60.0 C.Y.	2.00	118.00	118.00	236.00	100*
4	Close Mine Openings						
	A. Adits	1.0 EACH	500.00	2.00	2.00	1000.00	100*
	B. Shafts	2.0 EACH	500.00	2.00	2.00	1000.00	100*
5	Provide Water	4.3 MGAL	15.00	0.00	0.00	0.00	100*
6	Fertilizer	0.1 AC	185.00	0.28	0.28	51.80	100*
7	Seed	0.1 AC	630.00	0.28	0.28	176.40	100*
8	Mulch	0.1 AC	900.00	0.28	0.28	252.00	100*
	Sub Total - Schedule II					3466.20	
	Total					50226.68	

* Work completed on this item

L.C. Hanson Co.

Page 4 Of 12

ITEMIZATION OF QUANTITIES AND COSTS

ITEM NO.	DESCRIPTION	ESTIMATED PLAN QUANTITY	UNIT BID PRICE	UNITS OF	UNITS OF	TOTAL	% OF
				WORK COMPLETED THIS REQUEST	WORK COMPLETED TO DATE	COST OF COMPLETED WORK	EST. QUANT. COMP.
1	Mobilization	1.0 L.S.	500.00	0.00	1.00	500.00	100*
2	Debris Cleanup	1.0 L.S.	200.00	0.00	1.00	200.00	100*
3	Salvage & Replace Topsoil	1000.0 C.Y.	1.25	0.00	902.20	1127.75	100*
4	Waste Pile Disposal	1.0 L.S.	2000.00	0.00	1.00	2000.00	100*
5	Subsidence Grading	1.0 L.S.	750.00	0.00	1.00	750.00	100*
6	Provide Water	58.0 MGAL	10.00	0.00	16.50	165.00	100*
7	Fertilizer	2.0 AC	92.50	0.00	2.20	203.50	100*
8	Seed	2.0 AC	420.00	0.00	2.20	924.00	100*
9	Mulch	2.0 AC	600.00	0.00	2.20	1320.00	100*
	Sub-Total - Schedule III					7190.25	
	Total					57416.93	

* Work completed on this item

PAY REQUEST NO. TWO (2) FINAL

L.C. Hanson Co.

PROJECT:Johnson Hill Group (6 Sites)			MONT A/E 88-46-117			Page 5 Of 12	
SCH.IV - Gossen Mine			ITEMIZATION OF QUANTITIES AND COSTS				
ITEM NO.	DESCRIPTION	ESTIMATED PLAN QUANTITY	UNIT BID PRICE	UNITS OF WORK COMPLETED THIS REQUEST	UNITS OF WORK COMPLETED TO DATE	TOTAL COST OF COMPLETED WORK	% OF EST. QUANT. COMP.
1	Mobilization	1.0 L.S.	1500.00	1.00	1.00	1500.00	100*
2	Debris Cleanup	1.0 L.S.	100.00	1.00	1.00	100.00	100*
3	Salvage & Replace Topsoil	270.0 C.Y.	1.50	208.00	208.00	312.00	100*
4	Close Mine Opening						
	A. Adit	1.0 EACH	1000.00	1.00	1.00	1000.00	100*
	B. Shaft	1.0 EACH	1000.00	1.00	1.00	1000.00	100*
5	Subsidence Grading	1.0 L.S.	750.00	1.00	1.00	750.00	100*
6	Provide Water	20.9 MGAL	10.00	2.50	2.50	25.00	100*
7	Fertilizer	0.5 AC	92.50	0.42	0.42	38.85	100*
8	Seed	0.5 AC	630.00	0.42	0.42	264.60	100*
9	Mulch	0.5 AC	900.00	0.42	0.42	378.00	100*
10	Farm Fence - Type F-3M	600.0 L.F.	0.80	743.00	743.00	594.40	100*
11	Double Panel	4.0 EACH	90.00	4.00	4.00	360.00	100*
12	Single Panel	1.0 EACH	75.00	1.00	1.00	75.00	100*
13	Terminal Post	4.0 EACH	25.00	4.00	4.00	100.00	100*
14	F-3 Farm Fence Gate	16.0 L.F.	7.50	16.00	16.00	120.00	100*
	Sub-Total - Schedule IV					6617.85	
	Total					64034.78	

* Work completed on this item

L.C. Hanson Co.

Page 6 of 12 |

ITEMIZATION OF QUANTITIES AND COSTS

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* Work completed on this item

PAY REQUEST NO. TWO (2) FINAL

L.C. Hanson Co.

PROJECT: Johnson Hill Group (6 Sites)

MONT A/E 88-46-117

Page 7 of 12

SCH. VI - Lambert II NE Mine							
ITEMIZATION OF QUANTITIES AND COSTS							
ITEM NO.	DESCRIPTION	ESTIMATED PLAN QUANTITY	UNIT BID PRICE	UNITS OF WORK COMPLETED THIS REQUEST	UNITS OF WORK COMPLETED TO DATE	TOTAL COST OF COMPLETED WORK	% OF EST. QUANT. COMP.
1	Mobilization	1.0 L.S.	176.00	1.00	1.00	176.00	100*
2	Salvage & Replace Topsoil	460.0 C.Y.	1.00	375.00	375.00	375.00	100*
3	Waste Pile Disposal	1.0 L.S.	100.00	1.00	1.00	100.00	100*
4	Close Mine Openings						
5	A. Adits	1.0 EACH	500.00	1.00	1.00	500.00	100*
6	B. Shafts	1.0 EACH	600.00	1.00	1.00	600.00	100*
7	Subsidence Grading	1.0 L.S.	310.00	1.00	1.00	310.00	100*
8	Provide Water	31.0 MGAL	10.00	2.50	2.50	25.00	100*
9	Fertilizer	1.0 AC	92.50	1.10	1.10	101.75	100*
10	Seed	1.0 AC	420.00	1.10	1.10	462.00	100*
11	Mulch	1.0 AC	750.00	1.10	1.10	825.00	100*
12							
13							
14							
15							
16							
Sub-Total - Schedule VI						3474.75	
Total						72342.41	

* Work completed on this item

L.C. Hanson Co.

Page 8 Of 12

ITEMIZATION OF QUANTITIES AND COSTS

* Work completed on this item

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Page 9 of 12

ITEMIZATION OF QUANTITIES AND COSTS

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Page 10 of 12|

ITEMIZATION OF QUANTITIES AND COSTS

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Page 11 of 12 |

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PAY REQUEST NO. TWO (2) FINAL

L.C. Hanson Co.

PROJECT: Johnson Hill Group (6 Sites)

MONT A/E 88-46-117

Page 12 Of 12

South Fork Mine		ITEMIZATION OF QUANTITIES AND COSTS					
ITEM NO.	DESCRIPTION	ESTIMATED PLAN QUANTITY	UNIT BID PRICE	UNITS OF WORK COMPLETED THIS REQUEST	UNITS OF WORK COMPLETED TO DATE	TOTAL COST OF COMPLETED WORK	% OF EST. QUANT. COMP.
	Change Order No. 1 (Cont'd)						
	SOUTH FORK MINE						
6	Work Directive Change #7						
	Alleviate Hazards at Named						
	Mine as per D.S.L. Directive.						
	Work Included Debris Cleanup,						
	Close Mine Opening &						
	Subsidence Backfill.						
	a. TEREX TS-14 Scraper	9.00 HRS	100.00	9.00	9.00	900.00	100 *
	b. CASE 680E Backhoe	9.00 HRS	49.97	9.00	9.00	449.73	100 *
	c. Tractor Truck w/ Lowboy	1.00 HRS	64.04	1.00	1.00	64.04	100 *
7	Reconciliation of Final						
	Quantities	1.00 L.S.	-2307.22	1.00	1.00	-2307.22	100 *
	Sub-Total - This Page					-893.45	
	Total - Change Order No. 1					4635.63	
	TOTAL - PAY REQUEST NO. 2					79285.26	

* Work completed on this item

RECEIVED

AUG 15 1989

L. C. HANSON CO.

2.12 CHANGE ORDER

Order No. One (1)

Date: July 26, 1989

Agreement Date: October 6, 1989

NAME OF PROJECT: JOHNSON HILL SITE (6 SITES)

OWNER: MONTANA DEPARTMENT OF STATE LANDS - AML BUREAU

CONTRACTOR: MITCHELL BROTHERS, INC. Box 736, Glendive, MT 59330

Change Orders must be accompanied by an itemized cost breakdown. You are hereby requested to comply with the following changes from the Contract Documents. (Show separate costs for materials, labor, equipment and miscellaneous. Show percent where applicable.)

ITEM NO	DESCRIPTION OF CHANGES - ESTIMATED QUANTITIES & UNITS	COST OF CHANGES				TOTAL UNIT COST	TOTAL COST
		MATERIALS	LABOR	EQUIP	MISC.		
JOHNSON HILL SITE							
1.	W.D.C. #2 - Backfill new collapse.						
	a. TEREX TS-14 Scraper	Incl.	Incl.	1.0 HR	Incl.	100.00	\$ 100.00
	b. CASE 680E Backhoe	Incl.	Incl.	1.75 HR	Incl.	49.97	87.45
2.	W.D.C. #3 - Additional subsidence						
	a. TEREX TS-14 Scraper	Incl.	Incl.	0.75 HR	Incl.	100.00	75.00
	b. CASE 680E Backhoe	Incl.	Incl.	0.25 HR	Incl.	49.97	12.49
SCHMIDT MINE							
3.	W.D.C. #4 - Close mine openings and backfill subsidence.						
	a. J.D. 690A Excavator	Incl.	Incl.	4.5 HR	Incl.	58.24	262.08
	b. CASE 580C Backhoe	Incl.	Incl.	4.5 HR	Incl.	49.97	224.87
	c. CAT D-7 Dozer	Incl.	Incl.	1.5 HR	Incl.	81.29	121.94
	d. Dump Truck	Incl.	Incl.	2.0 HR	Incl.	54.42	108.84
LAMBERT II MINE							
4.	W.D.C. #5 - Close additional shaft, reduce highwall and backfill subsidence.						
	a. Shaft closure - Unit Contract Price - GOSSEN MINE	1.0 EA	Incl.	Incl.	Incl.	1000.00	1000.00
	b. J.D. 690A Excavator	Incl.	Incl.	4.5 HR	Incl.	58.24	262.08
BULLER MINE							
5.	W.D.C. #6 - Alleviate hazards at named mine as per DSL directive. Work included closing mine openings, waste pile disposal, and re-vegetation.						
	a. TEREX TS-14 Scraper	Incl.	Incl.	14.0 HR	Incl.	100.00	1400.00
	b. CAT D-7 Dozer	Incl.	Incl.	18.5 HR	Incl.	81.29	1503.87
	c. Tractor Truck w/Lowboy	Incl.	Incl.	1.5 HR	Incl.	64.04	96.06
	d. Revegetation	0.16 AC	Incl.	Incl.	Incl.	1715.00	274.40

ITEM NO	DESCRIPTION OF CHANGES - ESTIMATED QUANTITIES & UNITS	COST OF CHANGES				TOTAL UNIT COST	TOTAL COST
		MATERIALS	LABOR	EQUIP	MISC.		
<hr/>							
SOUTH FORK MINE							
6.	W.D.C. #7 - Alleviate hazards at named mine as per DSL directive. Work included debris cleanup, close mine opening, and subsidence backfill.						
a.	TEREX TS-14 Scraper	Incl.	Incl.	9.0 HR	Incl.	100.00	900.00
b.	CASE 680E Backhoe	Incl.	Incl.	9.0 HR	Incl.	49.97	449.73
c.	Tractor Truck w/Lowboy	Incl.	Incl.	1.0 HR	Incl.	64.04	64.04
7.	Reconciliation of Final Quantities (SEE ATTACHED)						- 2307.22

TOTAL COST-	MAT'LS, LABOR, EQUIPMENT & MISC.	\$ 4635.63
	OVERHEAD & PROFIT @ _____ (Incl)	0.00
	GRAND TOTAL - THIS CHANGE ORDER	\$ 4635.63

Original Contract Price	\$ 74,649.63
Current Contract Price Adjusted by Previous Change Order	74,649.63
Cost This Change Order (+ or -)	+ 4,635.63
New Contract Price Including This Change Order	\$ 79,285.26

The completion date as set forth in the Contract Documents shall be increased by SEVEN (7) calendar days.

The date of completion of all work will be July 28, 1989.

Description and Justification for Change:

1. See Work Directive Changes for DESCRIPTION and JUSTIFICATION.

SURETY CONSENT

The Surety hereby consents to the aforementioned Contract Change Order and agrees that its bond or bonds shall apply and extend to the Contract as thereby modified or amended per this Change Order. The principal and the Surety further agree that on or after execution of this consent, the penalty of the applicable Performance Bond or Bonds is hereby increased by Four Thousand Six Hundred Thirty Five and 63/100

(\$ 4,635.63) (One hundred percent (100%) of the Change Order amount) and

the penalty of the applicable Payment Bond or Bonds is hereby increased by Four

Thousand Six Hundred Thirty Five and 63/100 (\$ 4,635.63) (One hundred percent (100%) of the Change Order amount).

COUNTERSIGNED BY MONTANA RESIDENT AGENT

3S Insurance Montana, Inc.

FBS Insurance Billings

Countersigned by:

Montana Resident Agent

SURETY

Transamerica Premier Insurance Company

BY: Kip W. Vandeventer

(Seal)

Kip W. Vandeventer, Attorney-in-fact

Recommended by: L.C. Hanson Company Allan W. Hise, Engineer

Accepted by: Mitchell Bros Inc., Contractor

Approved by: Gary Marshall, Owner

RECONCILIATION OF FINAL QUANTITIES

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	ACTUAL QUANTITY	CHANGE IN PRICE
<u>SCHEDULE I - JOHNSON HILL MINE</u>				
4.	SALV & REPLACE TOPSOIL	2400 C.Y.	1593 C.Y.	-\$ 645.60
5.	CLOSE MINE OPENINGS			
	B. SHAFTS	1 EACH	2 EACH	+ 600.00
7.	SUBSIDENCE BACKFILL	60 C.Y.	143 C.Y.	+ 83.00
8.	PROVIDE WATER	646.2 MGAL	343.5 C.Y.	- 3027.00
9.	FERTILIZER	5.0 ACRE	5.75 ACRE	+ 69.38
10.	SEED	5.0 ACRE	5.75 ACRE	+ 315.00
11.	MULCH	5.0 ACRE	5.75 ACRE	+ 450.00
12.	FARM FENCE - TYPE F-3M	2320 L.F.	2539 L.F.	+ 175.20
13.	DOUBLE PANEL	8 EACH	9 EACH	+ 90.00
14.	SINGLE PANEL	3 EACH	2 EACH	- 75.00
Sub-Total				-\$ 1965.02

SCHEDULE II - SCHMIDT MINE

3.	SALV & REPLACE TOPSOIL	60 C.Y.	118 C.Y.	+\$ 116.00
4.	CLOSE MINE OPENINGS			
	A. ADITS	1 EACH	2 EACH	+ 500.00
5.	PROVIDE WATER	4.3 MGAL	0 MGAL	- 64.50
6.	FERTILIZER	0.1 ACRE	0.28 ACRE	+ 33.30
7.	SEED	0.1 ACRE	0.28 ACRE	+ 113.40
8.	MULCH	0.1 ACRE	0.28 ACRE	+ 162.00
Sub-Total				+\$ 860.20

SCHEDULE III - NELSON MINE

3.	SALV & REPLACE TOPSOIL	1000 C.Y.	902.2 C.Y.	+\$ 122.25
6.	PROVIDE WATER	58.0 MGAL	16.5 MGAL	- 415.00
7.	FERTILIZER	2.0 ACRE	2.2 ACRE	+ 18.50
8.	SEED	2.0 ACRE	2.2 ACRE	+ 84.00
9.	MULCH	2.0 ACRE	2.2 ACRE	+ 120.00
Sub-Total				-\$ 314.75

RECONCILIATION OF FINAL QUANTITIES

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	ACTUAL QUANTITY	CHANGE IN PRICE
<u>SCHEDULE IV - GOSSEN MINE</u>				
3.	SALV & REPLACE TOPSOIL	270 C.Y.	208 C.Y.	-\$ 93.00
6.	PROVIDE WATER	20.9 MGAL	2.5 MGAL	- 184.00
7.	FERTILIZER	0.5 ACRE	0.42 ACRE	- 7.40
8.	SEED	0.5 ACRE	0.42 ACRE	- 50.40
9.	MULCH	0.5 ACRE	0.42 ACRE	- 72.00
10.	FARM FENCE - TYPE F-3M	600 L.F.	743 L.F.	+ 114.40
Sub-Total				-\$ 292.40
=====				
<u>SCHEDULE V - LAMBERT II MINE</u>				
3.	SALV & REPLACE TOPSOIL	612 C.Y.	554 C.Y.	-\$ 58.00
4.	SUBSIDENCE BACKFILL	763 C.Y.	882 C.Y.	+ 119.00
7.	PROVIDE WATER	30.0 MGAL	2.5 MGAL	- 412.50
Sub-Total				-\$ 351.50
=====				
<u>SCHEDULE VI - LAMBERT II NE MINE</u>				
3.	SALV & REPLACE TOPSOIL	460 C.Y.	375 C.Y.	-\$ 85.00
8.	PROVIDE WATER	31.0 MGAL	2.5 MGAL	- 285.00
9.	FERTILIZER	1.0 ACRE	1.1 ACRE	+ 9.25
10.	SEED	1.0 ACRE	1.1 ACRE	+ 42.00
11.	MULCH	1.0 ACRE	1.1 ACRE	+ 75.00
Sub-Total				-\$ 243.75
TOTAL SCHEDULES I - VI				<u>-\$ 2307.22</u>

APPENDIX B

SLIDE LOG

JOHNSON HILL GROUP

1. 11/88 Johnson Hill Site - Aerial during construction.
2. 11/88 Johnson Hill Site - Aerial during construction.
3. 11/88 Johnson Hill Site - Items salvaged for Landowner.
4. 11/88 Johnson Hill Site - Removal of debris from pit.
5. 11/88 Johnson Hill Site - Debris cleanup.
6. 11/88 Johnson Hill Site - Debris cleanup.
7. 11/88 Johnson Hill Site - Salvaging topsoil w/backhoe.
8. 11/88 Johnson Hill Site - Salvaging topsoil w/backhoe.
9. 11/88 Johnson Hill Site - Removing slack pile.
10. 11/88 Johnson Hill Site - Disposing of coal waste.
11. 11/88 Johnson Hill Site - Coal waste embankment.
12. 11/88 Johnson Hill Site - Burying coal waste/reducing slopes.
13. 11/88 Johnson Hill Site - Burying coal waste/reducing slopes.
14. 11/88 Johnson Hill Site - Burying coal waste/reducing slopes.
15. 11/88 Johnson Hill Site - Burying coal waste/reducing slopes.
16. 11/88 Johnson Hill Site - Burying coal waste/reducing slopes.
17. 11/88 Johnson Hill Site - Burying coal waste/reducing slopes.
18. 11/88 Johnson Hill Site - Burying coal waste/reducing slopes.

19. 11/88 Johnson Hill Site - Burying coal waste/reducing slopes.
20. 11/88 Johnson Hill Site - Burying coal waste/reducing slopes.
21. 11/88 Johnson Hill Site - Waste Pile #1 - prior to removal.
22. 11/88 Johnson Hill Site - Waste Pile #2 - prior to removal.
23. 11/88 Johnson Hill Site - Removal of Waste Pile #1.
24. 11/88 Johnson Hill Site - Removal of Waste Pile #2.
25. 11/88 Johnson Hill Site - Removal of Waste Pile #3.
26. 11/88 Johnson Hill Site - Watering fill for compaction.
27. 11/88 Johnson Hill Site - Watering fill for compaction.
28. 11/88 Johnson Hill Site - Dozer pushing scraper.
29. 11/88 Johnson Hill Site - Embankment placed along coal seam.
30. 11/88 Johnson Hill Site - Backhoe preparing adit for closure.
31. 11/88 Johnson Hill Site - Backhoe preparing adit for closure.
32. 11/88 Johnson Hill Site - Backhoe preparing adit for closure.
33. 11/88 Johnson Hill Site - Backhoe closing adit.
34. 11/88 Johnson Hill Site - Airshaft prior to closure.
35. 11/88 Johnson Hill Site - Open airshaft.
36. 11/88 Johnson Hill Site - Open airshaft.
37. 11/88 Johnson Hill Site - Open airshaft.
38. 11/88 Johnson Hill Site - Backhoe placing concrete shaft closure.

39. 11/88 Johnson Hill Site - Concrete shaft closure in place.
40. 11/88 Johnson Hill Site - Completed site grading.
41. 10/88 Schmidt Mine - Aerial preconstruction view.
42. 7/87 Schmidt Mine - Ground view prior to construction.
43. 6/89 Schmidt Mine - Site backfilling and grading.
44. 6/89 Schmidt Mine - Mulching disturbed area.
45. 6/89 Schmidt Mine - Site backfilling and grading.
46. 11/88 Nelson Mine - Aerial view prior to construction.
47. 11/88 Nelson Mine - Aerial view prior to construction.
48. 11/88 Nelson Mine - Aerial view prior to construction.
49. 11/88 Nelson Mine - Ground view of waste pile prior to construction.
50. 11/88 Nelson Mine - Construction in progress - topsoil pile on right.
51. 11/88 Nelson Mine - Regrading areas.
52. 11/88 Nelson Mine - Regrading areas.
53. 11/88 Nelson Mine - Regrading areas.
54. 11/88 Nelson Mine - Regrading areas.
55. 11/88 Nelson Mine - Completed site.
56. 11/88 Nelson Mine - Completed site.
57. 11/88 Nelson Mine - Completed site - same view as Photo #50.
58. 11/88 Nelson Mine - Straw mulch on site.
59. 11/88 Nelson Mine - Seeding disturbed areas.
60. 11/88 Gossen Mine - Preconstruction aerial view.

61.	11/88	Gossen Mine - Preconstruction aerial view.
62.	6/89	Gossen Mine - Airshaft w/fence.
63.	6/89	Gossen Mine - Subsidence grading area.
64.	6/89	Gossen Mine - Subsidence grading area.
65.	6/89	Gossen Mine - Subsidence grading area.
66.	6/89	Gossen Mine - Completed shaft closure.
67.	6/89	Gossen Mine - Completed graded area.
68.	6/89	Gossen Mine - Mulching disturbed areas.
69.	6/89	Gossen Mine - Mulched site.
70.	10/88	Lambert II Mine - Preconstruction aerial view.
71.	10/88	Lambert II Mine - Preconstruction aerial view.
72.	7/87	Lambert II Mine - Waste pile on west adit - preconstruction.
73.	7/87	Lambert II Mine - East adit - preconstruction.
74.	6/87	Lambert II Mine - West adit - preconstruction.
75.	6/89	Lambert II Mine - Preparing west adit for closure.
76.	6/89	Lambert II Mine - Open air shaft near west adit.
77.	6/89	Lambert II Mine - Open air shaft near west adit.
78.	6/89	Lambert II Mine - Closing west adit.
79.	7/89	Lambert II Mine - Regrading adit and waste pile area.
80.	6/89	Lambert II Mine - Subsidence that tractor fell into in 1989.
81.	6/89	Lambert II Mine - Subsidence that tractor fell into in 1988.
82.	6/89	Lambert II Mine - Mine opening in subsidence of Photo #81.

83.	6/89	Lambert II Mine - Mulching site.
84.	6/89	Lambert II Mine - Mulched site.
85.	6/89	Lambert II Mine - Mulched site.
86.	6/89	Lambert II Mine - Mulched site.
87.	10/88	Lambert II NE Mine - Preconstruction aerial view.
88.	10/88	Lambert II NE Mine - Preconstruction aerial view.
89.	6/89	Lambert II NE Mine - Stripping topsoil east adit.
90.	6/89	Lambert II NE Mine - Stripping topsoil west adit.
91.	6/89	Lambert II NE Mine - Preparing west adit for closure.
92.	11/88	Buller Mine - Preconstruction aerial view.
93.	7/89	Buller Mine - Open east adit.
94.	7/89	Buller Mine - Open west adit.
95.	7/89	Buller Mine - Soil seal completed on east adit.
96.	7/89	Buller Mine - Soil seal completed on west adit.
97.	7/89	Buller Mine - Topsoil on soil seal - east pit.
98.	7/89	Buller Mine - Topsoil on soil seal - west adit.
99.	10/88	South Fork Mine - Preconstruction aerial view.
100.	7/88	South Fork Mine - Open adit - preconstruction.
101.	7/88	South Fork Mine - Subsidence.
102.	7/88	South Fork Mine - Subsidence.
103.	7/88	South Fork Mine - Foundation and debris.

-- Equipment --

104.	11/88	Case 680 E Backhoe.
105.	6/89	John Deere 690A Excavator.
106.	6/89	White transport truck w/lowboy trailer.
107.	11/88	Revegetation equipment.
108.	11/88	Pickup with straw crimper.
109.	11/88	Air compressor.
110.	11/88	Tool van, pickup truck, compressor.
111.	11/88	Caterpillar D-7 Dozer.
112.	11/88	Michigan 110, 11B Scraper.
113.	11/88	Terex TS14 Scraper.
114.	6/89	International water truck.
115.	11/88	International water truck - 4000 gallon.

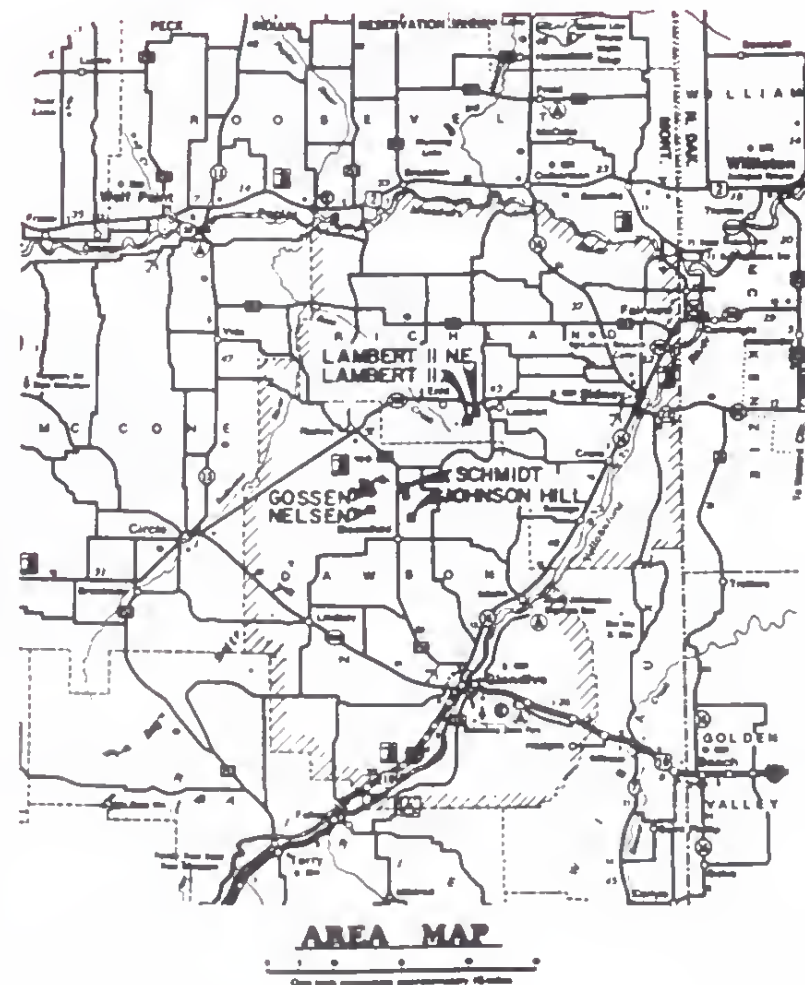
APPENDIX C

MINE RECLAMATION PROJECT
JOHNSON HILL GROUP (6 SITES)

LOCATED IN
DAWSON AND RICHLAND COUNTIES, MONTANA

MONT A/E 88-46-117

PREPARED FOR
MONTANA DEPARTMENT OF STATE LANDS
ABANDONED MINE RECLAMATION BUREAU



INDEX

DESCRIPTION	SHEET NO.
Cover Sheet	1
Johnson Hill Site - Reclamation Plan	2
Gossen Mine - Reclamation Plan	3
Nelson Mine - Reclamation Plan	4
Schmidt, Lambert II & II NE - Reclamation Plan	5

LANDOWNERS - CONTACT PERSONS

JOHNSON HILL MINE
E.1/2, SEC. 31, T.20N., R.54E.
Lloyd & Kathryn Hostetler
Bloomfield, MT. 59315
Phone (406) 583-7753

W.1/2, SEC. 32, T.20N., R.54E.
Wally Helleberg
Bloomfield, MT. 59315
Phone (406) 583-7750

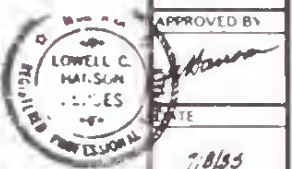
SCHMIDT MINE
NW.1/4, SEC. 34, T.21N., R.53E.
Warren Schwartz
P.O. Box 1002
Wolf Point, MT. 59201
Phone (406) 653-1106

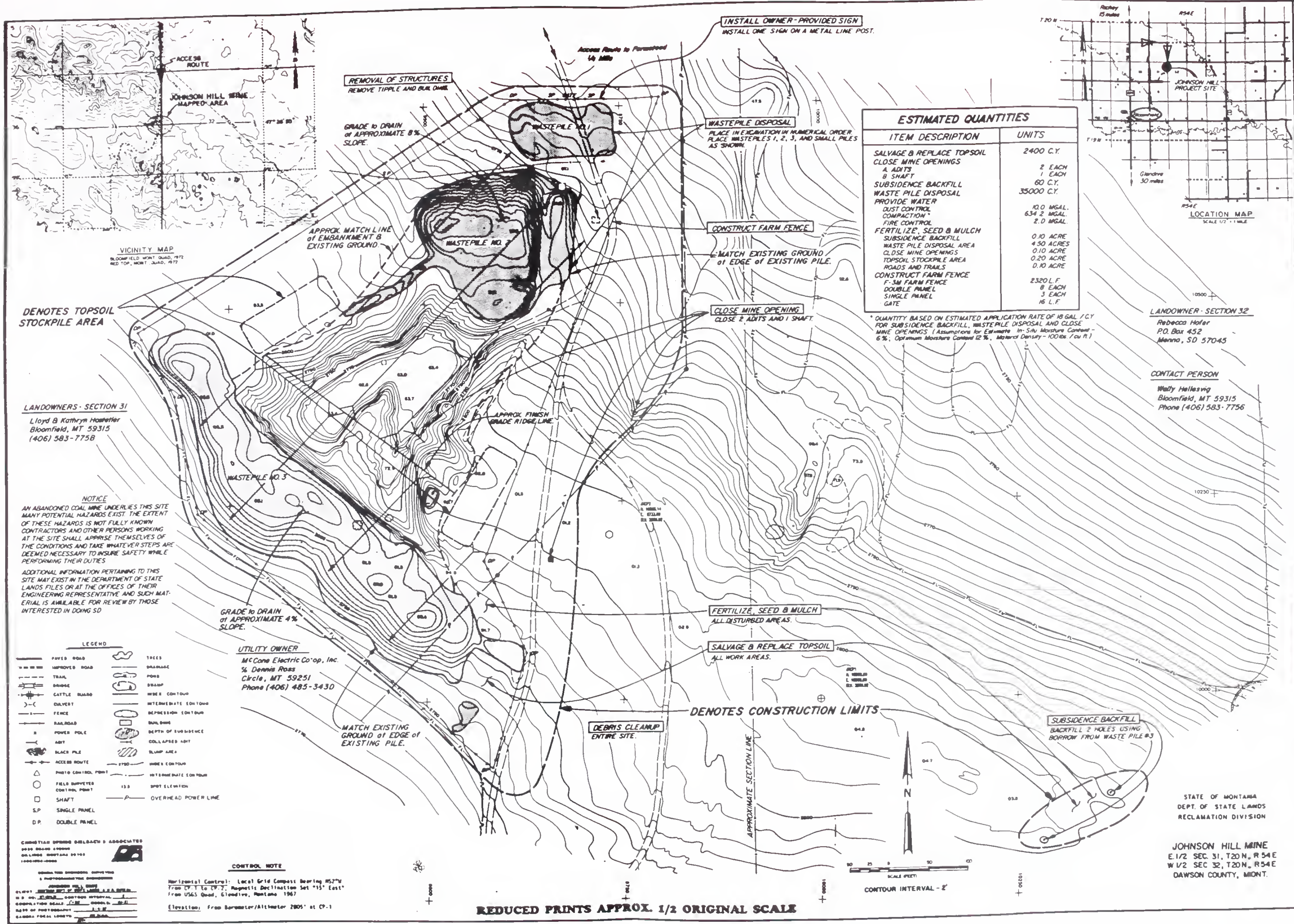
NELSON MINE
NE.1/4, SEC. 19, T.20N., R.53E.
Bob Whitmer
Route 1, Box 25
Richey, MT. 59259
Phone (406) 773-5804
OR
1221 Parkhill Drive
Billings, MT. 59102
Phone (406) 252-0039

GOSSEN MINE
S.1/3, SEC. 7, T.20N., R.53E.
Walter Gossen
P.O. Box 117
Richey, MT. 59259
Phone (406) 773-5812

LAMBERT II MINE
SE.1/4, SEC. 19, T.22N., R.55E.
Glacier Park Co.
P.O. Box 579
Miles City, MT. 59301
Phone (406) 232-1274

LAMBERT II N.E. MINE
NW.1/4, SEC. 17, T.22N., R.55E.
Waldo Post
Rural Route
Savage, MT. 59262
Phone (406) 790-2448





DENOTES TOPSOIL STOCKPILE AREA

LANDOWNERS - SECTION 31
Lloyd B Kathryn Hopper
Bloomfield, MT 59315
(406) 583-7758

NOTICE
AN ABANDONED COAL MINE UNDERLIES THIS SITE. MANY POTENTIAL HAZARDS EXIST. THE EXTENT OF THESE HAZARDS IS NOT FULLY KNOWN. CONTRACTORS AND OTHER PERSONS WORKING AT THE SITE SHALL APPRISE THEMSELVES OF THE CONDITIONS AND TAKE WHATEVER STEPS ARE DEEMED NECESSARY TO INSURE SAFETY WHILE PERFORMING THEIR DUTIES.
ADDITIONAL INFORMATION PERTAINING TO THIS SITE MAY EXIST IN THE DEPARTMENT OF STATE LANDS FILES OR AT THE OFFICES OF THEIR ENGINEERING REPRESENTATIVE. AND SUCH MATERIAL IS AVAILABLE FOR REVIEW BY THOSE INTERESTED IN DOING SO.

- LEGEND
- | | |
|------------------------------|----------------------|
| PAVED ROAD | TREES |
| IMPROVED ROAD | DRAINAGE |
| TRAIL | POND |
| BRIDGE | SHARP |
| CATTLE GUARD | WIDE CONTOUR |
| CHUTE | INTERMEDIATE CONTOUR |
| FENCE | DEPRESSION CONTOUR |
| RAILROAD | RAILROAD |
| POWER POLE | DEPTH OF SUBSIDENCE |
| BLANK PILE | COLLAPSED SHOT |
| ACCESS ROUTE | BLANK AREA |
| PHOTO CONTROL POINT | WIDE CONTOUR |
| FIELD SURVEYED CONTROL POINT | NOTES DATE (CONTOUR) |
| SHAFT | SPOT ELEVATION |
| S.P. SINGLE PANEL | OVERHEAD POWER LINE |
| D.P. DOUBLE PANEL | |

UTILITY OWNER
McCone Electric Co., Inc.
% Dennis Ross
Circle, MT 59251
Phone (406) 485-3430

MATCH EXISTING GROUND OF EDGE OF EXISTING PILE.

CONTROL NOTE

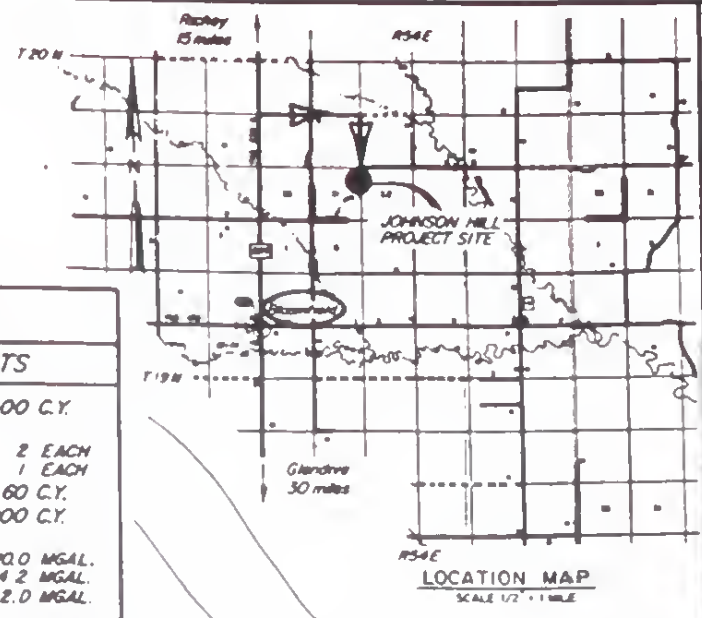
Horizontal Control: Local Grid Compass Bearing N52°W
From CP-1 to CP-2; Magnetic Declination Set "15" East
From USGS Quad, Glendive, Montana 1967
Elevation: From Barometer/Altimeter 2005' at CP-1

ESTIMATED QUANTITIES	
ITEM DESCRIPTION	UNITS
SALVAGE & REPLACE TOPSOIL	2400 C.Y.
CLOSE MINE OPENINGS	
4 ADITS	2 EACH
8 SHAFT	1 EACH
SUBSIDENCE BACKFILL	60 C.Y.
WASTE PILE DISPOSAL	35000 C.Y.
PROVIDE WATER	
DUST CONTROL	10.0 MGAL
COMPACTION*	634.2 MGAL
FIRE CONTROL	2.0 MGAL
FERTILIZE, SEED & MULCH	
SUBSIDENCE BACKFILL	0.10 ACRE
WASTE PILE DISPOSAL AREA	4.30 ACRE
CLOSE MINE OPENINGS	0.10 ACRE
TOPSOIL STOCKPILE AREA	0.20 ACRE
ROADS AND TRAILS	0.10 ACRE
CONSTRUCT FARM FENCE	
F-3M FARM FENCE	2320 L.F.
DOUBLE PANEL	8 EACH
SINGLE PANEL	3 EACH
GATE	16 L.F.

* QUANTITY BASED ON ESTIMATED APPLICATION RATE OF 10 GAL / C.Y. FOR SUBSIDENCE BACKFILL, WASTE PILE DISPOSAL AND CLOSE MINE OPENINGS. (Assumptions for Estimating: In-Situ Moisture Content - 6%; Optimum Moisture Content 12%; Material Density - 100 lbs / cu ft.)

LANDOWNER - SECTION 32
Rebecca Hofer
P.O. Box 452
Manno, SD 57045

CONTACT PERSON
Wally Hellesvig
Bloomfield, MT 59315
Phone (406) 583-7756



L. C. Hanson Co.
CONSULTING, CIVIL, SANITARY, MUNICIPAL AND STRUCTURAL ENGINEERS
HELENA, MONTANA

JOHNSON HILL SITE RECLAMATION PLAN
GENERAL LAYOUT AND SITE PLAN

DRAWN BY
L.D.R.
L.B.P.

CHECKED BY
T.D.K. 2/6/88

APPROVED BY

DATE
2/2/88

REVISED

SCALE
1" = 50'

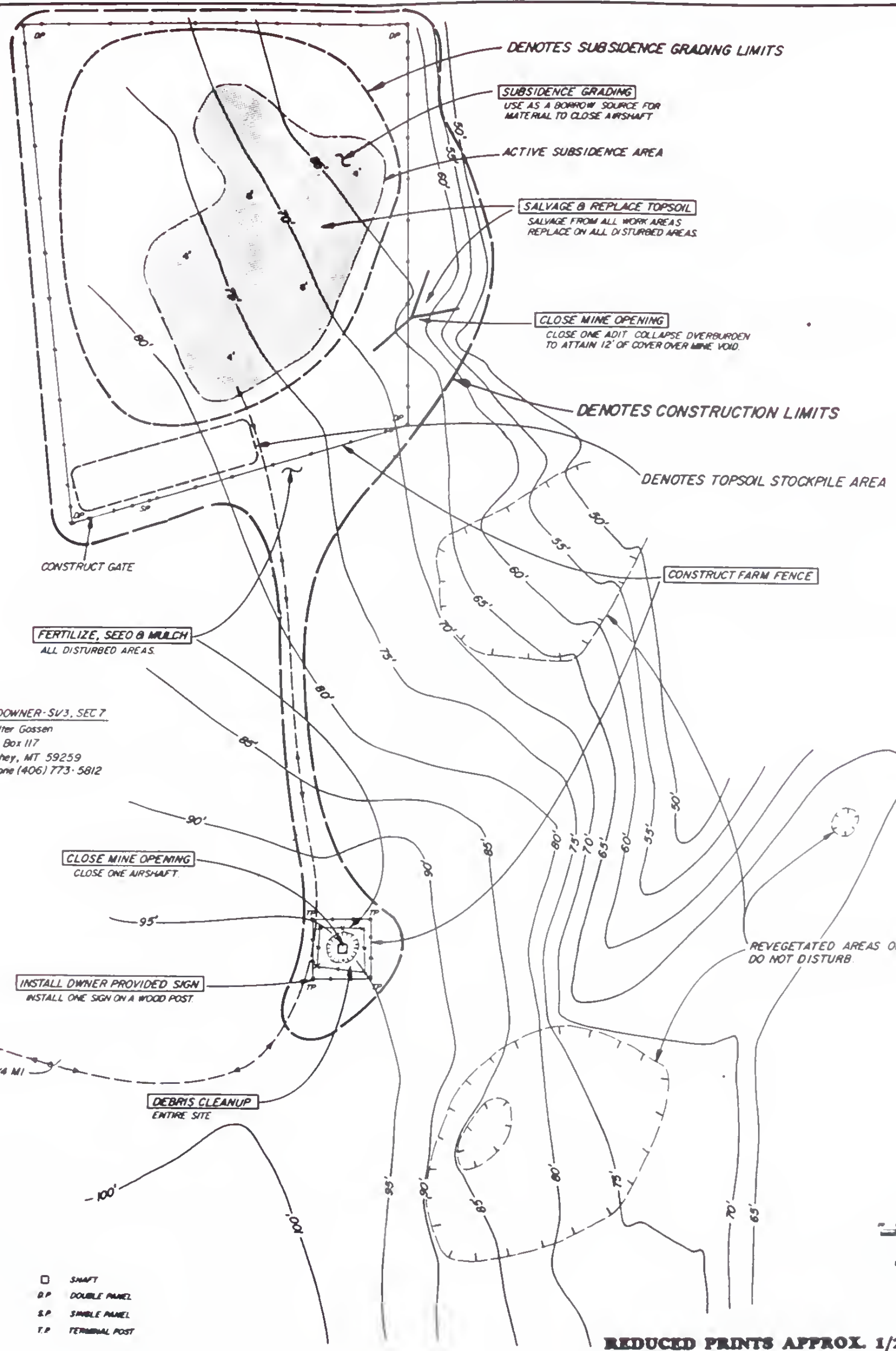
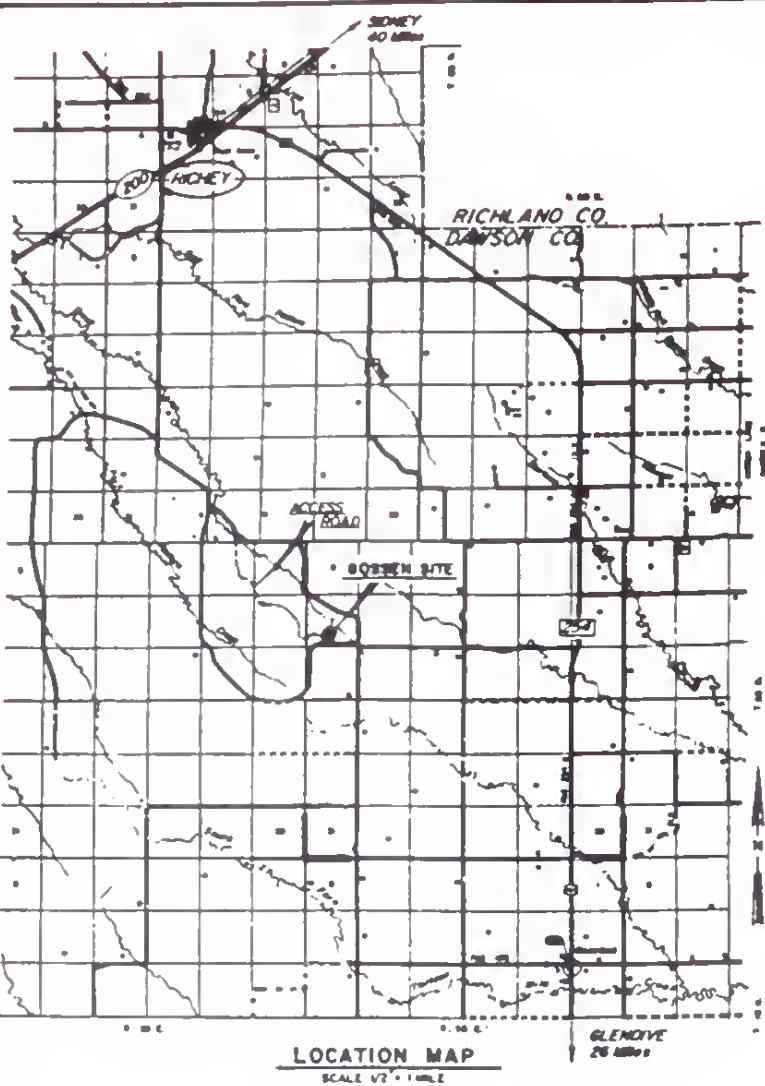
SHEET NO.
2 OF 5

87-10-08

STATE OF MONTANA
DEPT. OF STATE LANDS
RECLAMATION DIVISION

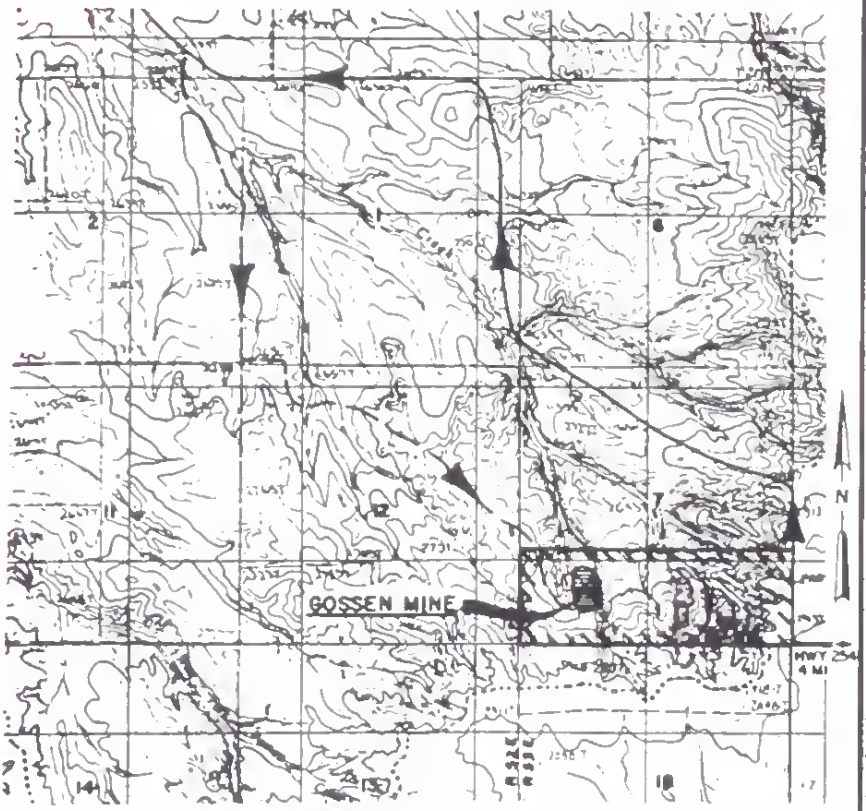
JOHNSON HILL MINE
E 1/2 SEC. 31, T20N, R54E
W 1/2 SEC. 32, T20N, R54E
DAWSON COUNTY, MONT.

REDUCED PRINTS APPROX. 1/2 ORIGINAL SCALE



ESTIMATED QUANTITIES	
ITEM DESCRIPTION	UNITS
SALVAGE & REPLACE TOPSOIL	270 CY
CLOSE MINE OPENINGS	
A ADIT	1 EACH
B SHAFT	1 EACH
SUBSIDENCE GRADING	750 CY
PROVIDE WATER	
COMPACTION	189 MGAL
DUST CONTROL	2.0 MGAL
FERTILIZE, SEED & MULCH	
SUBSIDENCE GRADING	0.33 ACRE
CLOSE MINE OPENINGS	0.07 ACRE
ROADS AND TRAILS	0.07 ACRE
TOPSOIL STOCKPILE AREA	0.03 ACRE
FARM FENCE	
F. 3M FARM FENCE	600 L.F.
DOUBLE PANEL	4 EACH
SINGLE PANEL	1 EACH
TERMINAL POST	4 EACH
GATE	16 L.F.

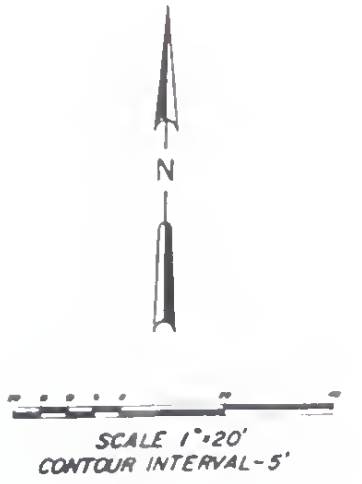
* QUANTITY BASED ON ESTIMATED APPLICATION RATE OF 10 GAL / CY
 FOR SUBSIDENCE GRADING AND CLOSE MINE OPENINGS MATERIAL
 (Assumptions for Estimate: 14" Silty Claystone Contain: 6%, Optimum
 Moisture Content 12%, Material Density: 100 lbs / cu ft)



NOTICE
 AN ABANDONED COAL MINE UNDERLIES THIS SITE. MANY POTENTIAL HAZARDS EXIST. THE EXTENT OF THESE HAZARDS IS NOT FULLY KNOWN. CONTRACTORS AND OTHER PERSONS WORKING AT THE SITE SHALL APPRISE THEMSELVES OF THE CONDITIONS AND TAKE WHATEVER STEPS ARE DEEMED NECESSARY TO INSURE SAFETY WHILE PERFORMING THEIR DUTIES.
 ADDITIONAL INFORMATION PERTAINING TO THIS SITE MAY EXIST IN THE DEPARTMENT OF STATE LANDS FILES OR AT THE OFFICES OF THEIR ENGINEERING REPRESENTATIVE AND SUCH MATERIAL IS AVAILABLE FOR REVIEW BY THOSE INTERESTED IN DOING SO.

TO FARMSTEAD 1 1/2 MILES
 TO COUNTY ROAD 3 MILES

- LEGEND**
- PAVED ROAD
 - IMPROVED ROAD
 - ACCESS ROUTE
 - FENCE
 - BP BURIED POWER LINE
 - BT BURIED TELEPHONE LINE
 - BOH 2 BORE HOLE (B.H.O.)
 - TREES
 - DRAINAGE
 - POND
 - SHARP
 - INDEX CONTOUR
 - INTERMEDIATE CONTOUR
 - DEPRESSION CONTOUR
 - BUILDING
 - SUBSIDENCE (B.DEPTH)
 - FISSURES
 - OPEN ADIT
 - CLOSED ADIT
 - WASTE PILE
 - SHAFT
 - DOUBLE PANEL
 - SINGLE PANEL
 - TERMINAL POST



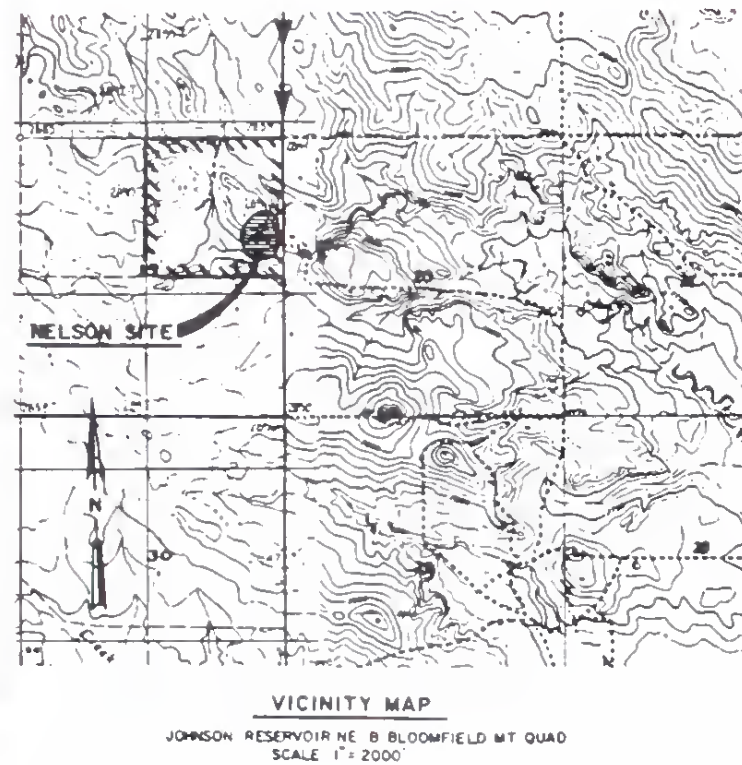
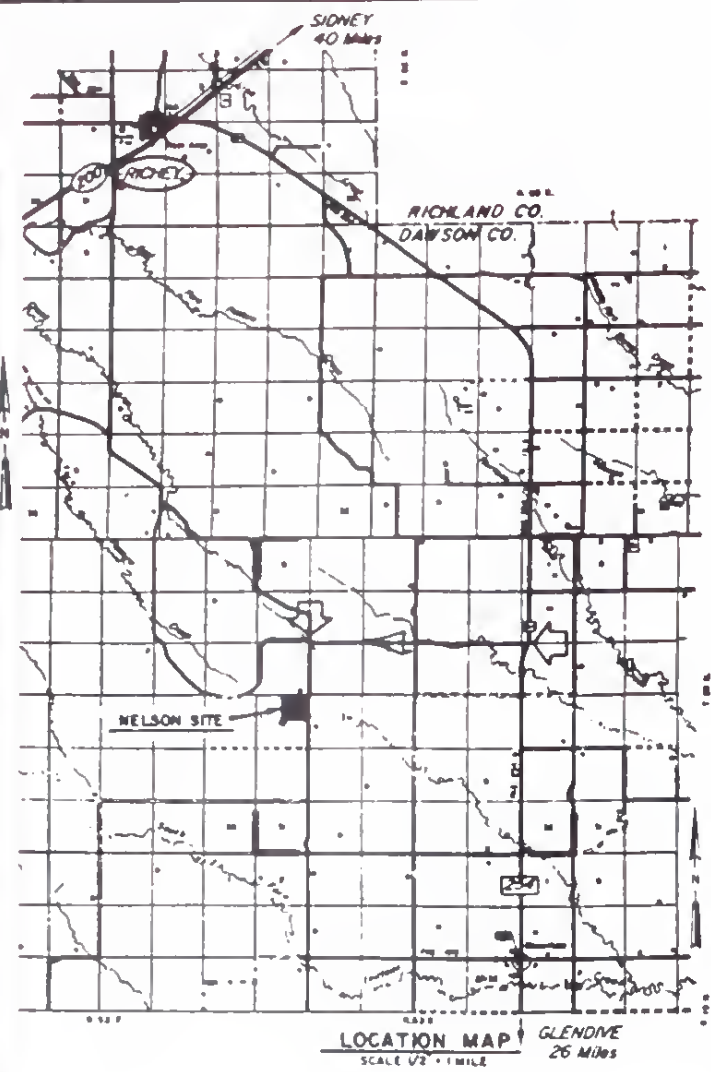
STATE OF MONTANA
 DEPT. OF STATE LANDS
 RECLAMATION DIVISION
 GOSSEN MINE
 S 1/2, Section 7, T.20N., R.53E.
 DAWSON CO MONTANA

REDUCED PRINTS APPROX. 1/2 ORIGINAL SCALE

L. C. Hanson Co.
 CONSULTING CIVIL, SANITARY, MUNICIPAL AND STRUCTURAL ENGINEERS
 HELENA, MONTANA

GOSSEN MINE RECLAMATION PLAN
SITE PLAN AND GENERAL LAYOUT

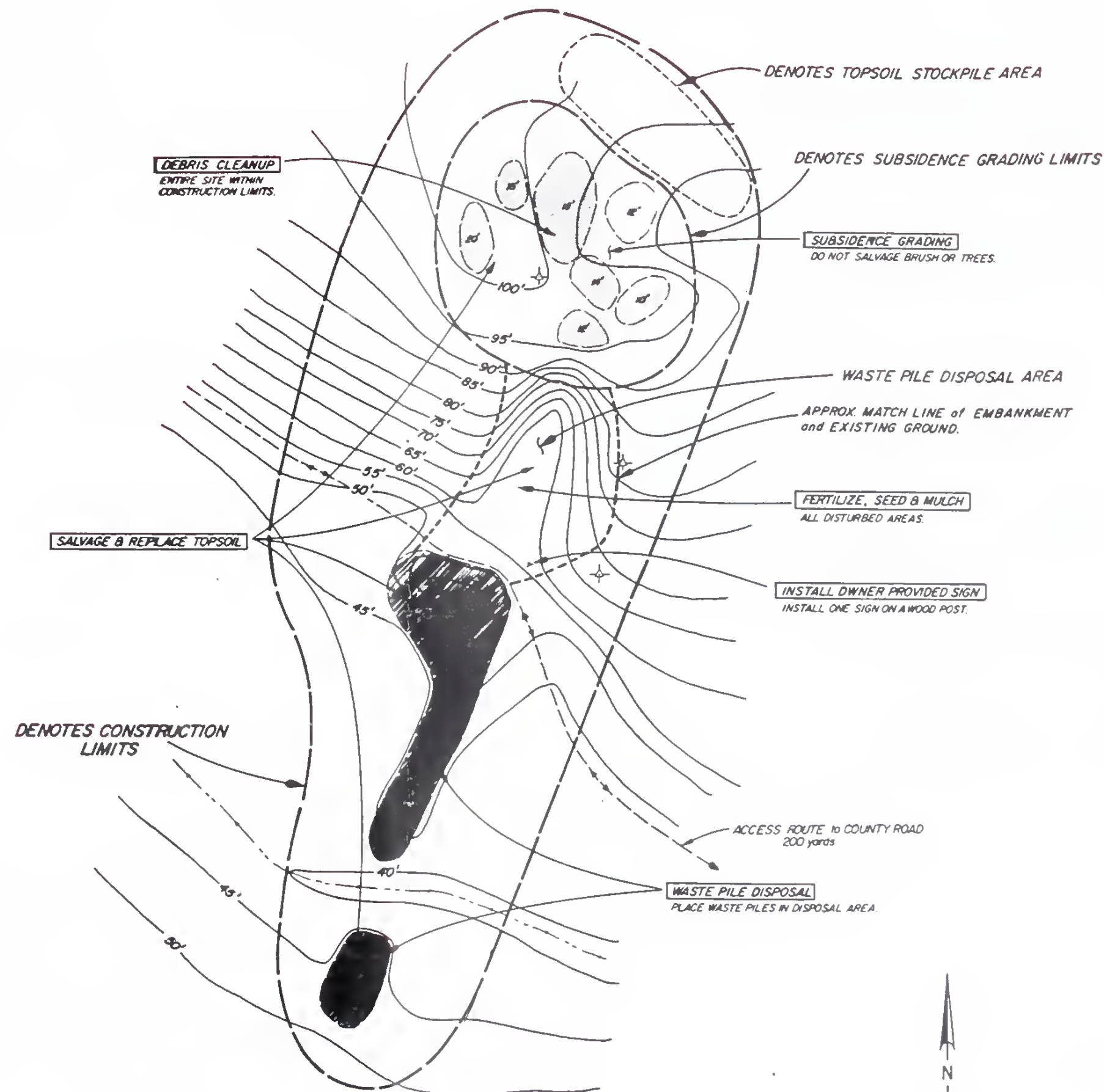
DRAWN BY
 L. B. Peterson
 CHECKED BY
 T.O.R. 2/16/88
 APPROVED BY
 DATE
 REVISED
 SCALE
 1" = 20'
 SHEET NO.
 3
 5
 87-10-09



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- LEGEND**
- PAVED ROAD
 - IMPROVED ROAD
 - ACCESS ROUTE
 - FENCE
 - BURIED POWER LINE
 - BURIED TELEPHONE LINE
 - BOREHOLE (B NO.)
 - TREES
 - DRAINAGE
 - POND

- SWAMP
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- DEPRESSION CONTOUR
- BUILDING
- SUBSIDENCE (B DEPTH)
- FISSURES
- OPEN ADIT
- CLOSED ADIT
- WASTE PILE



ESTIMATED QUANTITIES	
ITEM DESCRIPTION	UNITS
SALVAGE & REPLACE TOPSOIL	1000 C.Y.
SUBSIDENCE GRADING	1000 C.Y.
PROVIDE WATER	
COMPACTION*	54.0 MGAL
DUST CONTROL	4.0 MGAL
WASTE PILE DISPOSAL	2000 C.Y.
FERTILIZE, SEED & MULCH	
TOPSOIL STOCKPILE AREA	0.10 ACRE
SUBSIDENCE GRADING AREA	0.90 ACRE
WASTE PILE AREA	1.00 ACRE

* QUANTITY BASED ON ESTIMATED APPLICATION RATE 10 GAL / C.Y. FOR SUBSIDENCE GRADING AND WASTE PILE DISPOSAL MATERIAL. (Assumption: For Estimate: In-Situ Moisture Content - 6%, Optimum Moisture Content - 12%, Material Density - 100 lbs / cu ft.)

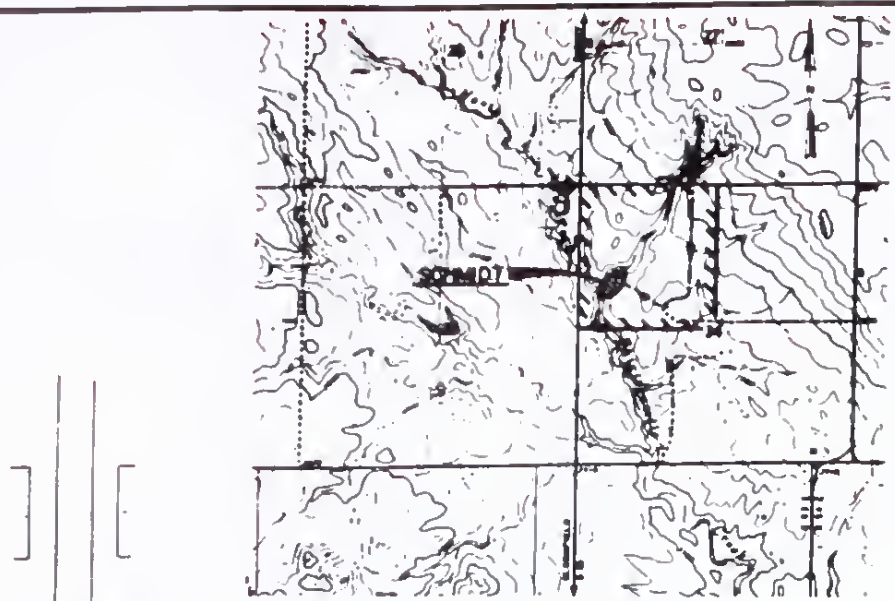
LANDOWNER - N 1/2 SEC. 19
Lillian Nelson
1711 North Merrill Ave.
Glendive, MT 59330

CONTACT PERSON
Bob Whitmer
Route 1, Box 25
Richey, MT 59259
Phone (406) 773-5804
-OR-
1222 Parkway Drive
Billings, MT 59102
Phone (406) 252-0639

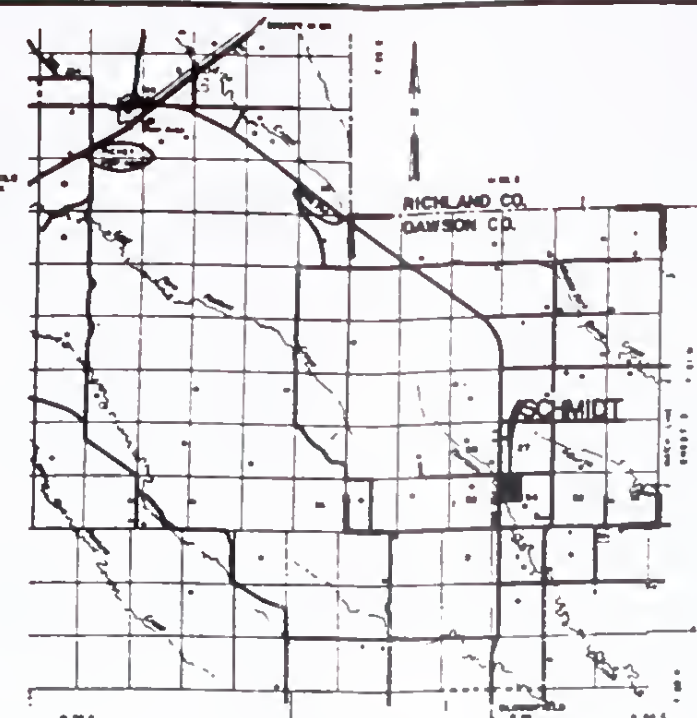
STATE OF MONTANA
DEPT. OF STATE LANDS
RECLAMATION DIVISION

NELSON MINE
NE 1/4, Section 19, T.20N., R.53E.
DAWSON CO., MONT.

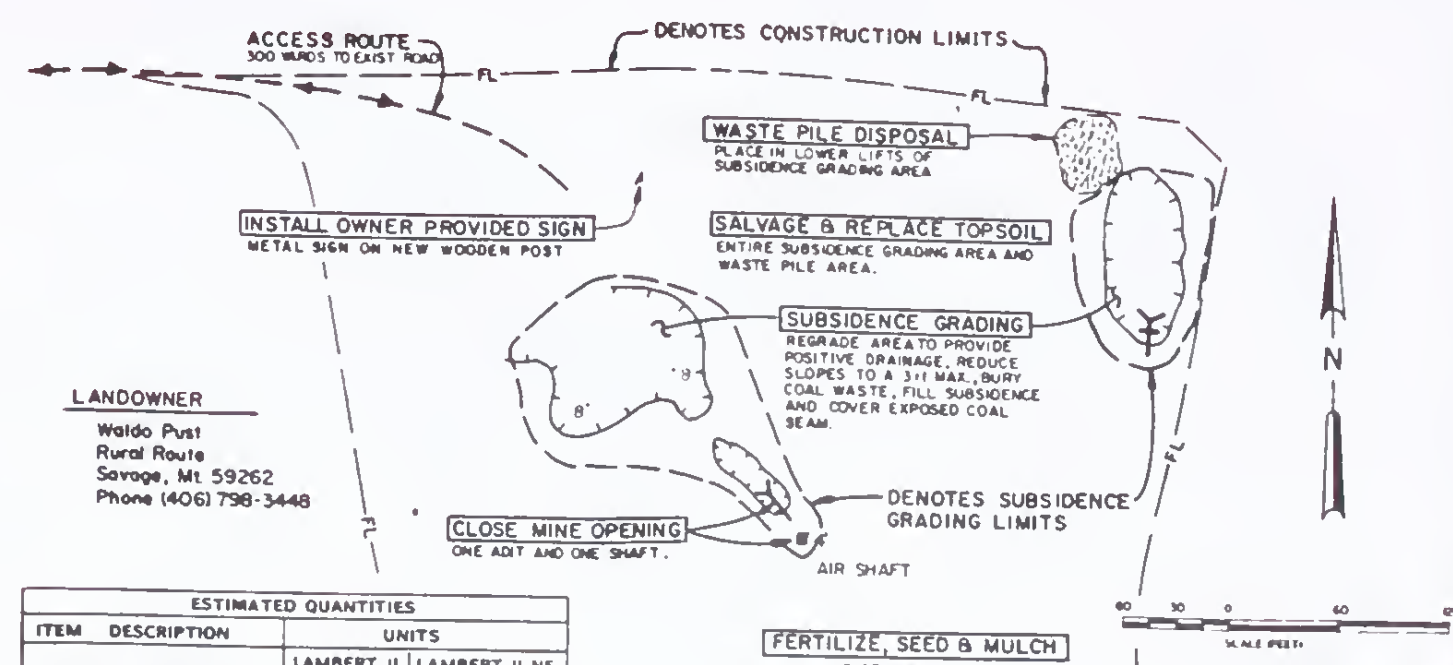
REDUCED PRINTS APPROX. 1/2 ORIGINAL SCALE



VICINITY MAP
CLAY BUTTE QUAD
SCALE 1" = 2000



LOCATION MAP
SCALE 1/2" = 1 MI.

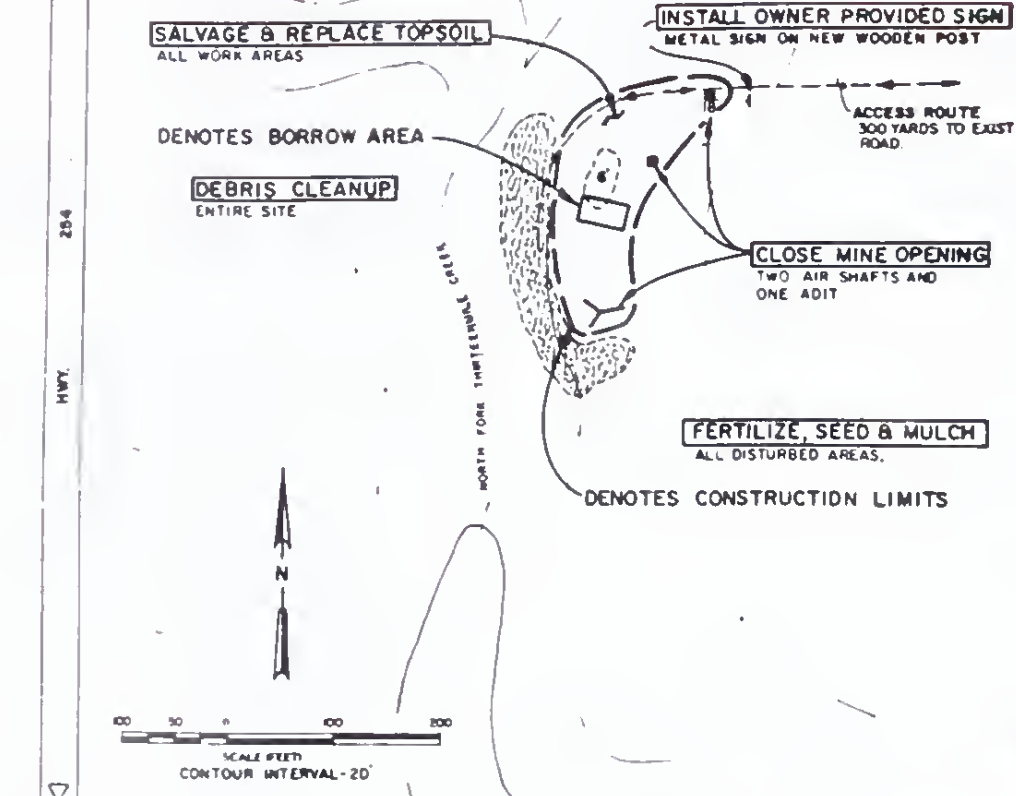


ESTIMATED QUANTITIES

ITEM DESCRIPTION	UNITS	
	LAMBERT II	LAMBERT II NE
SALVAGE & REPLACE TOPSOIL	612 C.Y.	660 C.Y.
CLOSE MINE OPENINGS	1 EACH	1 EACH
SUBSIDENCE BACKFILL	763 C.Y.	1071 C.Y.
SUBSIDENCE GRADING	294 C.Y.	130 C.Y.
WASTE PILE DISPOSAL	150 C.Y.	120 C.Y.
PROVIDE WATER	35.0 ACAL	26.0 ACAL
DEBRIS CLEANUP	5.0 ACAL	5.8 ACAL
FERTILIZER, SEED & MULCH	0.20 ACRE	0.60 ACRE
SUBSIDENCE GRADING AREA	0.30 ACRE	0.10 ACRE
WASTE PILE DISPOSAL AREA	0.10 ACRE	0.10 ACRE
OTHER AREAS	0.45 ACRE	0.10 ACRE
CLOSE MINE OPENING AREA	0.10 ACRE	0.10 ACRE
TOPSOIL STOCKPILE AREA	0.18 ACRE	0.18 ACRE
TRAILS AND ROADS	0.18 ACRE	0.18 ACRE

* QUANTITY BASED ON ESTIMATED APPLICATION RATE OF 18 GAL/C.Y. FOR SUBSIDENCE GRADING, SUBSIDENCE BACKFILL, WASTE PILE DISPOSAL AND/OR CLOSE MINE OPENING MATERIAL. (Assumptions: 100% Moisture Content = 100% Optimum Moisture Content = 120% Material Density = 100 lbs./cu.ft.)

LAMBERT II NE SITE
NW 1/4, SECTION 17, T22N, R55E
RICHLAND COUNTY, MONT.



SCHMIDT - ESTIMATED QUANTITIES

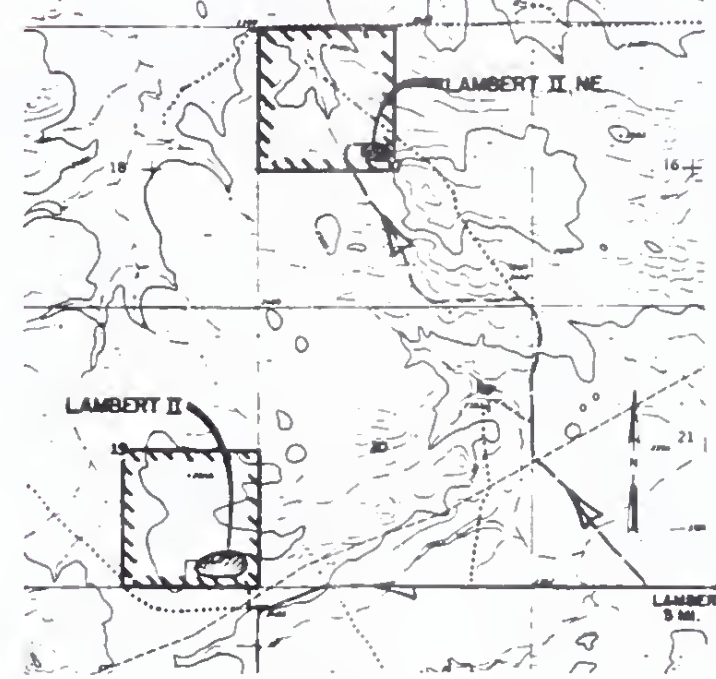
ITEM DESCRIPTION	UNITS
SALVAGE & REPLACE TOPSOIL	60 C.Y.
CLOSE MINE OPENINGS	1 EACH
SUBSIDENCE BACKFILL	763 C.Y.
SUBSIDENCE GRADING	294 C.Y.
WASTE PILE DISPOSAL	150 C.Y.
PROVIDE WATER	35.0 ACAL
DEBRIS CLEANUP	5.0 ACAL
FERTILIZER, SEED & MULCH	0.20 ACRE
SUBSIDENCE GRADING AREA	0.30 ACRE
WASTE PILE DISPOSAL AREA	0.10 ACRE
OTHER AREAS	0.45 ACRE
CLOSE MINE OPENING AREA	0.10 ACRE
TOPSOIL STOCKPILE AREA	0.18 ACRE
TRAILS AND ROADS	0.18 ACRE

* QUANTITY BASED ON ESTIMATED APPLICATION RATE OF 18 GAL/C.Y. FOR SUBSIDENCE GRADING, SUBSIDENCE BACKFILL, WASTE PILE DISPOSAL AND/OR CLOSE MINE OPENING MATERIAL. (Assumptions: 100% Moisture Content = 100% Optimum Moisture Content = 120% Material Density = 100 lbs./cu.ft.)

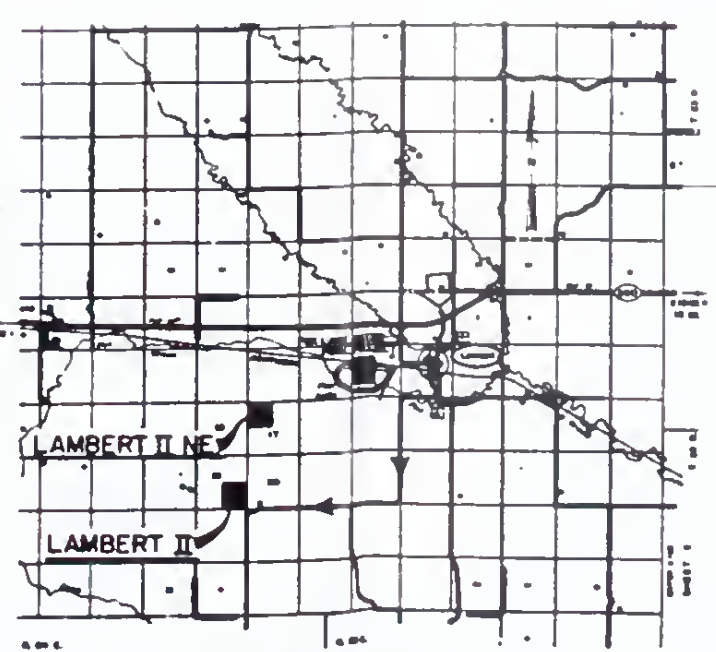
SCHMIDT SITE
NW 1/4, SECTION 34, T21N, R53E
DAWSON COUNTY, MONT

LANDOWNER/CONTACT PERSON
Warren Schwartz
P.O. Box 1002
Woh Point, Mt. 59201
Ph (406) 653-1168

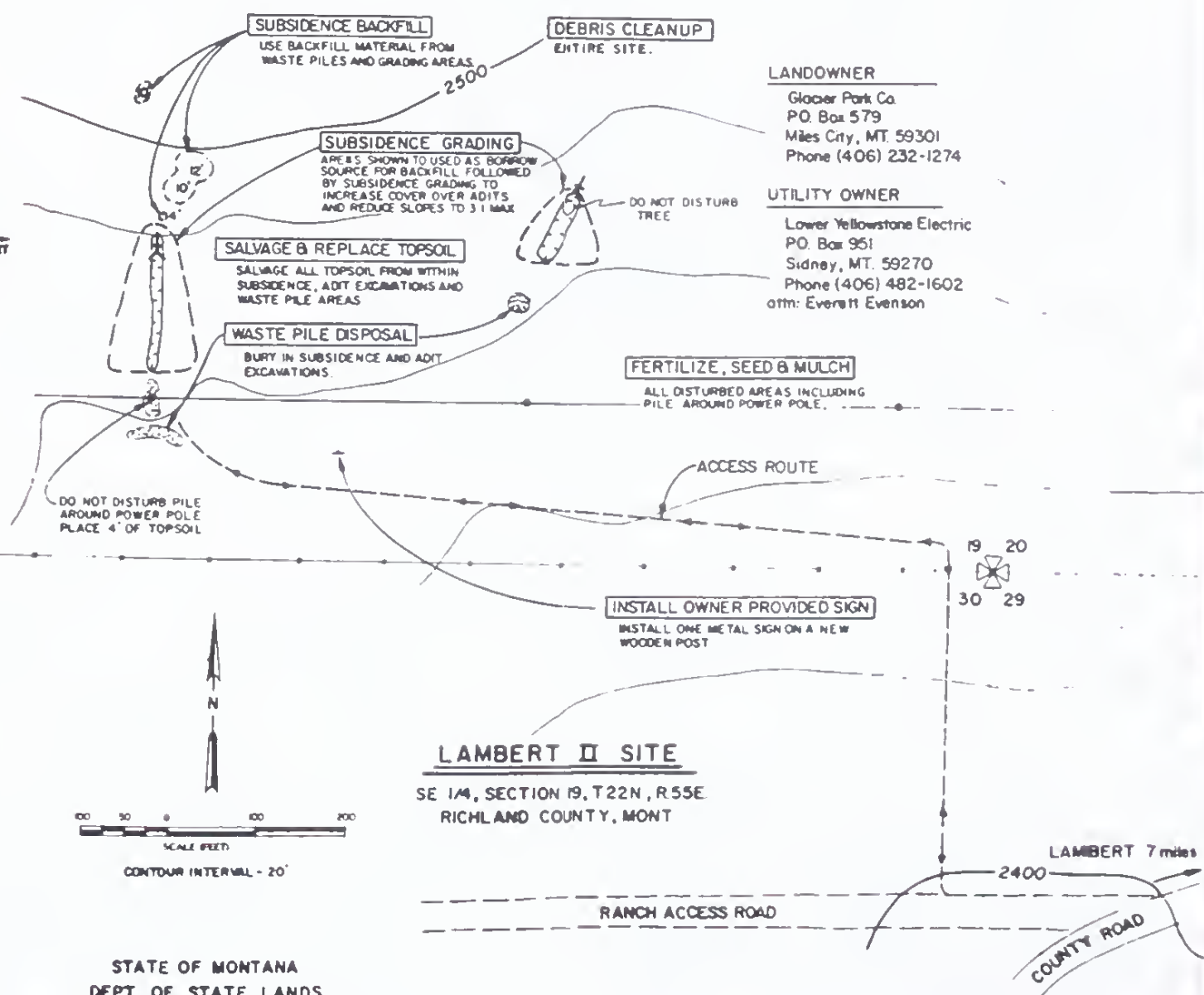
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VICINITY MAP
FOX LAKE MT QUAD
SCALE 1" = 2000



LOCATION MAP
SCALE 1/2" = 1 MI.



LAMBERT II SITE
SE 1/4, SECTION 19, T22N, R55E
RICHLAND COUNTY, MONT

STATE OF MONTANA
DEPT. OF STATE LANDS
RECLAMATION DIVISION

APPENDIX D

LAZ 22-10-12 141
01:30:00 18, 30
(22:10 18) group (6 18)
and 181 and 181, 181
18 18-18 18

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LAZ 22-10-12 141
01:30:00 18, 30
(22:10 18) group (6 18)
and 181 and 181, 181
18 18-18 18

LAZ 22-10-12 141
01:30:00 18, 30
(22:10 18) group (6 18)
and 181 and 181, 181
18 18-18 18

ANALYSIS OF PROFESSIONAL SERVICE FEES
DATE OF PREPARATION: September 18, 1989
PROJECT: Johnson Hill Group (6 Sites)
Dawson and Richland Counties, Montana
Mont A/E 88-46-117

PROFESSIONAL SERVICE	AMOUNT

* Data Gathering, Site Evaluation, Preliminary Engineering, Final Engineering, Bidding Documents	\$41,734.36
* Construction Administration, Construction Inspection, Final Report Preparation	\$21,547.81

L.C. HANSON CO. COSTS	----- \$63,282.17 -----
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CONSTRUCTION COSTS	----- \$79,285.00 -----
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PERCENTAGE ANALYSIS

PRE-CONST. LCH CO COST/CONSTRUCTION COST	52.64%
CONST. & POST CONST. LCH CO. COST/CONSTRUCTION COST	27.18%
TOTAL LCH CO. COST/CONSTRUCTION COST	79.82%

REMARKS: Services provided include lien determination, landowner consent, budget preparation, grant application, weed board approval, basic engineering, construction staking, contract administration, quantity accounting and full time resident inspection. This project involved six different sites originally with the Department adding two additional sites during the course of the Contract. Combining sites into one construction project achieves savings in administrative costs during construction.

